

# SITE DEVELOPMENT PLANS OF MCCRANEY GARRET BUILDING 1

PREPARED FOR:

MCCRANEY PROPERTY COMPANY

2257 VISTA PARKWAY #15

WEST PALM BEACH, FL 33411

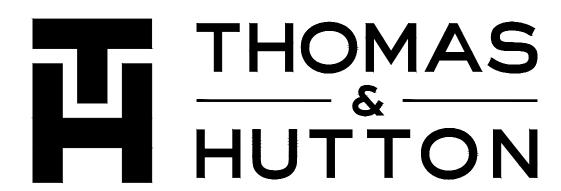
GARDEN CITY, GEORGIA

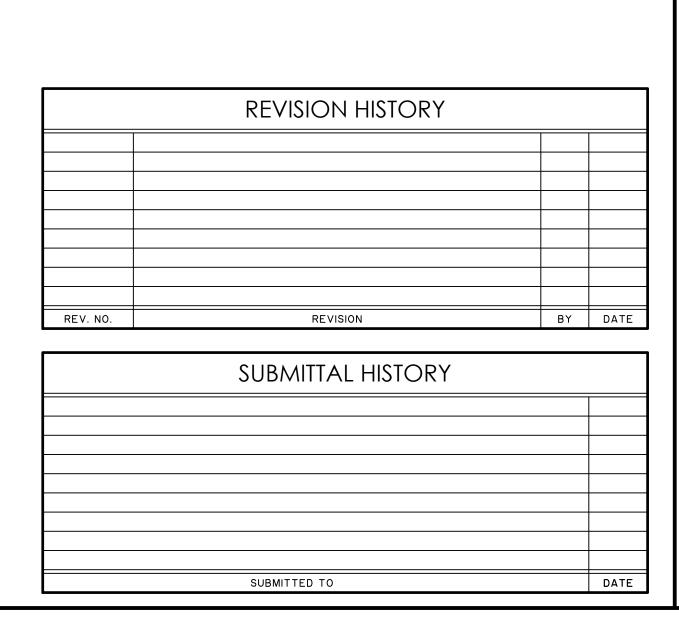
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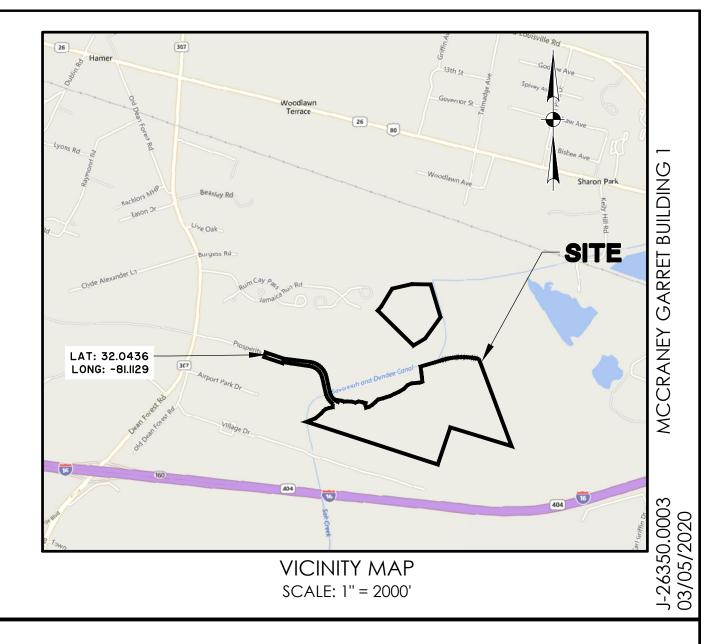
MARCH 5, 2020 REVISED:

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PREPARED BY:







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50 Park of Commerce Way Savannah, GA 31405 p.912.234.5300

EROSION CONTROL					
LEGEND					
DESCRIPTION	PLAN SYMBOL				
SILT FENCE	x				
LIMITS OF DISTURBANCE	LOD				
DISTURBED AREA STABILIZATION (MULCHING ONLY)	Ds1				
DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)	Ds2				
DISTURBED AREA STABILIZATION (PERMANENT VEGETATION)	Ds3				
DUST CONTROL	Du				
CHECK DAM (STONE)	Cd-S				
CONSTRUCTION EXIT	Co				
DIVERSION	Di				
SLOTTED BOARD DAM WITH STONE	Rt-B				
SILT FENCE - TYPE NS	Sd1-NS				
SILT FENCE - TYPE S	Sd1-S				
INLET SEDIMENT TRAP (FILTER FABRIC WITH FRAME)	Sd2-F				
INLET SEDIMENT TRAP (CURB INLET)	Sd2-P				
STORM DRAIN OUTLET PROTECTION	St				

DRAINAGE LEGEND					
DESCRIPTION	EXISTING	PROPOSED			
PIPE					
DITCH					
CURB INLET	0	•			
GRATE INLET					
JUNCTION BOX	0				
OUTLET STRUCTURE					

<u>ESCRIPTION</u>	<b>EXISTING</b>	PROPOSED
ATER MAIN	10"W	10"W
INGLE SERVICE LATERAL		
OUBLE SERVICE LATERAL	<u>&gt;</u>	>
ALVE AND BOX	$\otimes$	•
IRE HYDRANT W/VALVE & BOX	$\otimes$ - $\varphi$ -	ۥ
OST HYDRANT	)	<b>—</b>
EDUCER		•
ACKFLOW PREVENTOR		
ROSS	1_1	1_1
EE	<u> </u>	1-1
O° BEND - HORIZONTAL	一	
5° BEND - HORIZONTAL	/	/1
2-½° BEND - HORIZONTAL	/	/
¼° BEND - HORIZONTAL	1	1
END - VERTICAL		11
AP		

		<u>A </u>	<u> 3BF</u>	REVIATIONS	-	
HDPE	HIGH DENSITY POLYETHYLENE		JB	JUNCTION BOX	SDMH	STORM DRAINAGE MANHOLE
вот	воттом		LF	LINEAR FEET	SF	SQUARE FEET
CI	CURB INLET		MAX	MAXIMUM	ss	SANITARY SEWER
CPP	CORRUGATED PLASTIC PIPE		MIN	MINIMUM	тс	TOP OF CURB
DIP	DUCTILE IRON PIPE		мн	MANHOLE	TG	TOP OF GUTTER
EL	ELEVATION		ос	ON CENTER	TP	TOP OF PAVEMENT
FG	FINISH GRADE		PC	POINT OF CURVE	TW	TOP OF WALK
FH	FIRE HYDRANT		PH	POST HYDRANT	TYP	TYPICAL
FM	FORCE MAIN (SANITARY SEWER)		PT	POINT OF TANGENT	w	WATER
FP	FINISH PAD		PVC	POLYVINYL CHLORIDE	W/	WITH
FR	FRAME		RCP	REINFORCED CONCRETE PIPE	wv	WATER VALVE
GI	GRATE INLET		RJP	RESTRAINED JOINT PIPE	YI	YARD INLET
GV	GATE VALVE		R/W	RIGHT-OF-WAY		
INV	INVERT ELEVATION		SD	STORM DRAINAGE		

SEWER LEGEND					
DESCRIPTION	EXISTING	PROPOSED			
GRAVITY PIPE —	ss				
SINGLE SERVICE LATERAL					
DOUBLE SERVICE LATERAL		<del></del>			
MANHOLE	$\bigcirc$				
CLEANOUT	Оч	<b>•</b> 4			
FORCEMAIN —	——————————————————————————————————————	IO"FM IO"FM			
VALVE AND BOX	$\otimes$	$oldsymbol{\Theta}$			
FLUSH HYDRANT	) H	<b>&gt;</b>			
REDUCER		•			
BACKFLOW PREVENTOR					
CROSS	<u> </u>	1_1			
TEE	_	I <sup>-</sup> I			
90° BEND - HORIZONTAL	_	一			
45° BEND - HORIZONTAL	/	/			
22-½° BEND - HORIZONTAL	/	/			
II-¼° BEND - HORIZONTAL	1	1			
BEND - VERTICAL					
PLUG \ CAP					

OTHER UTILITIES LEGEND					
DESCRIPTION	<u>EXISTING</u>				
NATURAL GAS	——————————————————————————————————————				
TELEPHONE	——————————————————————————————————————				
UNDERGROUND TELEPHONE	UTL UTL				
ELECTRICITY	——————————————————————————————————————				
UNDERGROUND ELECTRICITY	——————————————————————————————————————				

### GENERAL NOTES

- CONTRACTOR SHALL VERIFY LOCATION & DEPTH OF ALL UTILITIES PRIOR TO BEGINNING WORK & NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 2. THE CONTRACTOR SHALL USE EXTREME CARE NOT TO DAMAGE EXISTING TREES WHICH ARE TO REMAIN.
- 3. ALL STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
- 4. CONTRACTOR SHALL LIMIT CLEARING ACTIVITIES & TREE REMOVAL TO AREAS INDICATED ON PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AREA CLEARED OUTSIDE THE LIMITS AND ANY DAMAGE TO REMAINING TREES.
- 5. ALL ELEVATIONS REFER TO NAVD 88 DATUM.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES.
- 7. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THOMAS & HUTTON.
- 8. ALL EXCAVATION AND BACKFILLING SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
- 9. ALL PROPOSED ELEVATIONS SHOWN ARE SUBGRADE OR FINAL DIRT GRADE (INCLUDING TOPSOIL) IN GRASSED AREAS UNLESS OTHERWISE INDICATED.
- IO. CALL BEFORE YOU DIG: 1-800-282-7411. FOR CITY WATER AND SANITARY SEWER LINE LOCATIONS, CONTACT THE UTILITIES PROTECTION CENTER (1-800-282-7411) A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO DIGGING.
- II. GRASSED AND LANDSCAPE AREAS SHALL BE GRADED AS NECESSARY TO PROVIDE POSITIVE DRAINAGE. ALL PRECAUTIONS SHALL BE TAKEN TO PROTECT TREES RETAINED. PROVIDE 4" MIN. TOPSOIL IN ALL LANDSCAPE AREAS.
- 12. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY

- SEWER, STORM SEWER, OR SEWER MANHOLE. THE DISTANCE SHALL BE MEASURED EDGE-TO-EDGE. A MINIMUM IS INCHES VERTICAL SEPARATION MUST BE MAINTAINED.
- 13. WHEN CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, THE WATER MAIN MAY BE LAID CLOSER TO A SEWER (ON A CASE-BY-CASE BASIS) PROVIDED THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST IS INCHES ABOVE THE TOP OF THE SEWER. IT IS ADVISED THE SEWER BE CONSTRUCTED OF MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND BE PRESSURE TESTED TO ASSURE WATER-TIGHTNESS PRIOR TO BACKFILLING.
- 14. THE MINIMUM DEPTH OF COVER OVER WATER LINES SHALL NOT BE LESS THAN 36" IN ANY CASE. WHERE IT IS IMPOSSIBLE TO MAINTAIN 36" COVER AND 18" MINIMUM SEPARATION, THE 36" COVER WILL BE MAINTAINED AND BOTH WATER AND SEWER LINES WILL BE CONSTRUCTED OF ONE SECTION EACH OF DUCTILE IRON PIPE. THE PIPES SHALL BE SUPPORTED AND CENTERED AT THE CROSSING WITH MECHANICAL JOINTS ON EACH LINE AT BOTH SIDES OF THE
- 15. THE REQUIRED MINIMUM 3 FT. OF COVER SHALL BE MAINTAINED ON THE EXISTING DOMESTIC AND FIRE SERVICE LINES. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING WATER VALVES AND HYDRANTS. AT NO TIME SHALL FLOW TO DOMESTIC WATER AND FIRE PROTECTION SUPPLY LINES BE DISRUPTED.
- 16. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE HAZARDOUS TO TRAFFIC. THEY SHALL AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPE, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT FREE FROM DIRT AND FOREIGN MATTER AT ALL TIMES.
- 17. ANY DEFECTIVE, DAMAGED, OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTABLE MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
- 18. CLEAN THE INTERIORS OF ALL PIPE BY BRUSHING, SWABBING OR WASHING OUT OF ALL DIRT BEFORE LAYING.
- 19. FLUSH THE NEW WATER, SEWER, AND NON-POTABLE PIPE LINES UNTIL THE WATER RUNS CLEAR AT THE END OF ALL MAINS AND LATERALS. THIS SHOULD BE COMPLETED AFTER THE PRESSURE TEST AND BEFORE DISINFECTION. A MINIMUM FLUSHING VELOCITY OF 2.5 ft/sec must be achieved to purge all foreign material from all proposed mains.

MR. DAVE WILLIAMS

(704)-965-9268

(912) 234-5300

THOMAS & HUTTON

SAVANNAH, GA 31405

**ENGINEER:** 

MCCRANEY PROPERTY COMPANY

2257 VISTA PARKWAY #15

WEST PALM BEACH, FL 33411

50 PARK OF COMMERCE WAY

COUNTY

TOWN

ZONING

**SURVEYOR:** 

THOMAS & HUTTON

(912) 234-5300

SAVANNAH, GA 31405

50 PARK OF COMMERCE WAY

CHATHAM

GARDEN CITY

- 20. ALL JURISDICTIONAL WETLANDS ARE SUBJECT TO FEDERAL PROSECUTION BY THE ARMY CORPS OF ENGINEERS FOR WETLAND VIOLATIONS.
- 21. CONTRACTOR IS RESPONSIBLE FOR CONNECTING BUILDING ROOF LEADS, WATER CONNECTIONS, AND SANITARY CONNECTIONS. ALL LOCATIONS AND ELEVATIONS TO BE VERIFIED WITH BUILDING ARCHITECTURAL, PLUMBING AND FIRE PROTECTION PLANS. CONTRACTOR REQUIRED TO COORDINATE ALL BUILDING LEAD LOCATIONS AND ELEVATIONS WITH BUILDING CONTRACTOR PRIOR TO INSTALLATION.
- 22. REFERENCE SURVEYS/REPORTS:
- 22.I. THOMAS AND HUTTON TOPOGRAPHIC SURVEY DATED 2019.
- 22.2. TERRACON GEOTECHNICAL REPORT DATED 2019.
- 23. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN ACCEPTABLE BACKFLOW PREVENTION DEVICE AND FIRE HYDRANT METER OBTAINED FROM THE CITY OF SAVANNAH'S CONVEYANCE AND DISTRIBUTION DEPARTMENT.
- 24. AN ACCEPTABLE WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
- 25. ALL MATERIALS USED AND COME INTO CONTACT WITH DRINKING WATER DURING ITS DISTRIBUTION SHALL NOT ADVERSELY AFFECT DRINKING WATER QUALITY AND PUBLIC HEALTH AND MUST BE CERTIFIED FOR CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION STANDARD 61 (ANSI/NSF STANDARD 61).
- 26. IN ALL WATER LINE PROJECTS, CARE WILL BE TAKEN TO KEEP THE INTERIOR OF THE WATER PIPE CLEAN PRIOR TO CONNECTION TO THE COUNTY SYSTEM. THIS WILL BE ACCOMPLISHED BY STRICT ADHERENCE TO EFFINGHAM COUNTY SPECIFICATIONS.
- 27. CONTRACTOR RESPONSIBLE FOR PROVIDING ENGINEER AS-BUILT SURVEY IN AUTOCAD FORMAT. AS-BUILT SURVEY TO INCLUDE TWO COPIES OF SURVEY AND BE SIGNED BY REGISTERED LAND SURVEYOR IN THE STATE OF GEORGIA.
- 28. ACCORDING TO FEMA PANEL 1305ICO129G AND 1305ICO135H THIS PROJECT IS LOCATED IN ZONE AE AND X .

GENERAL INFORMATION

MCCRANEY PROPERTY COMPANY

2257 VISTA PARKWAY #15
WEST PALM BEACH, FL 33411
(704)-965-9268

PREPARED FOR:



NO. REVISIONS BY DATE

50 Park of Commerce Way avannah, GA 31405 • 912.234.5

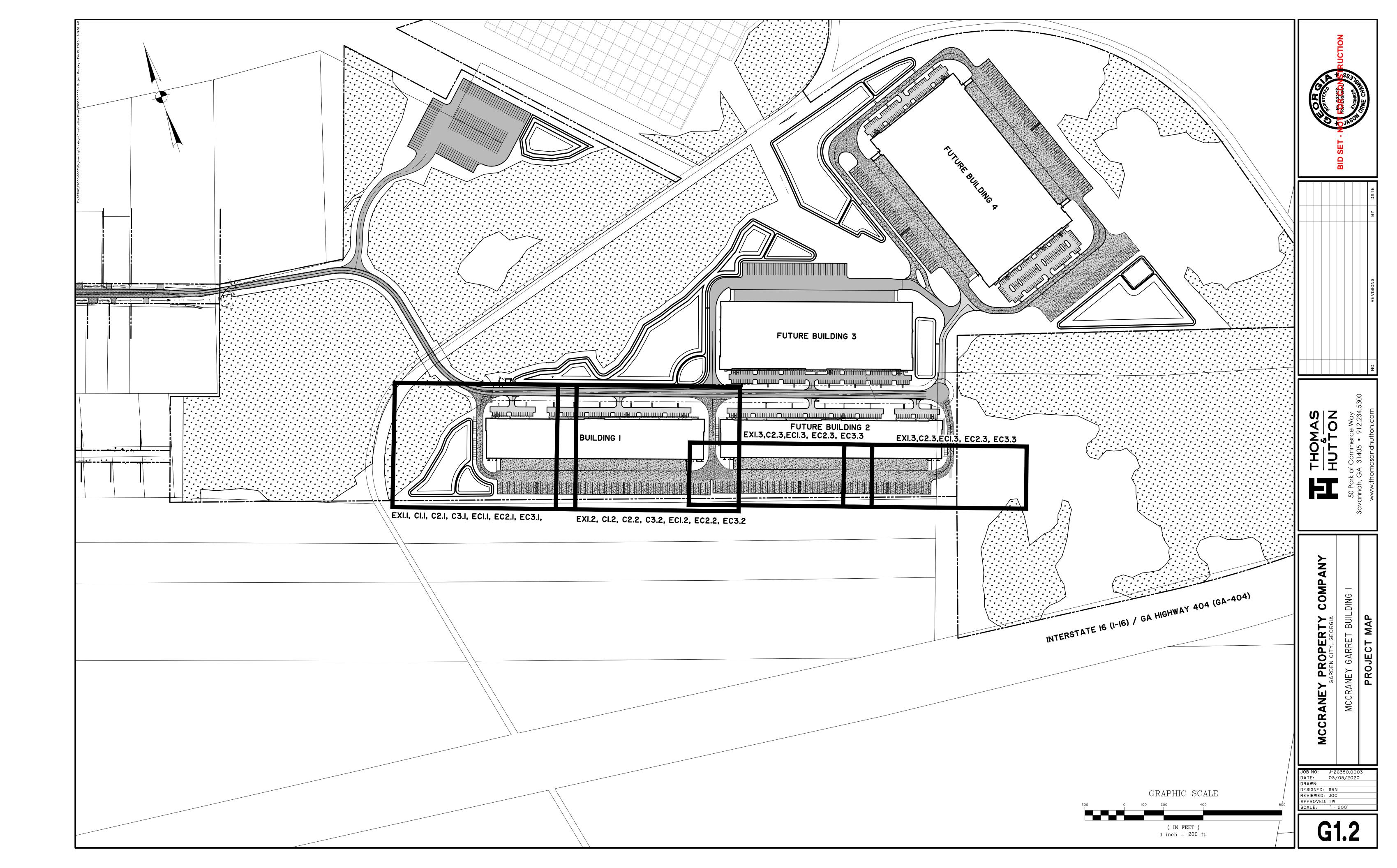
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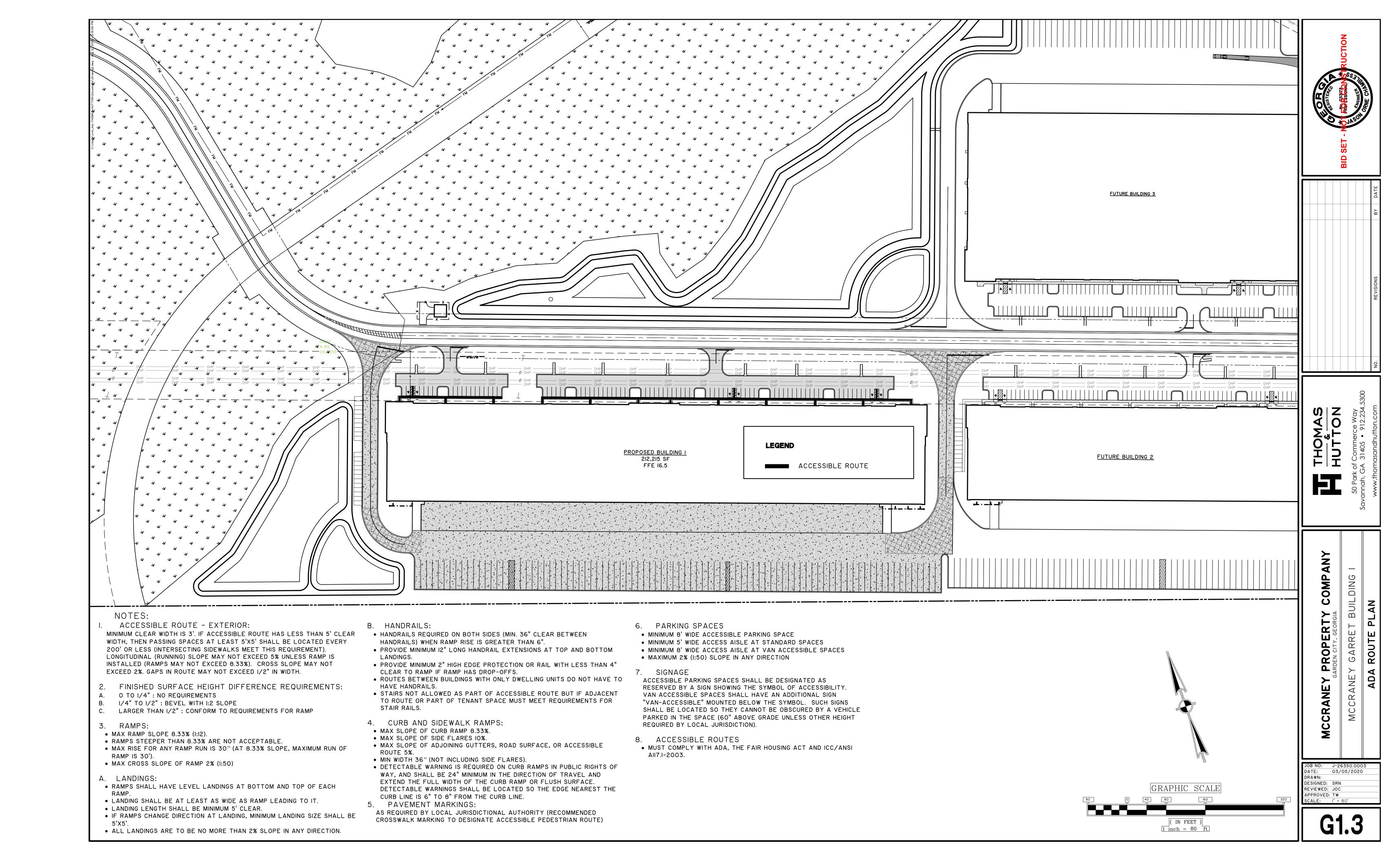
ANEY GARRET BUILDING

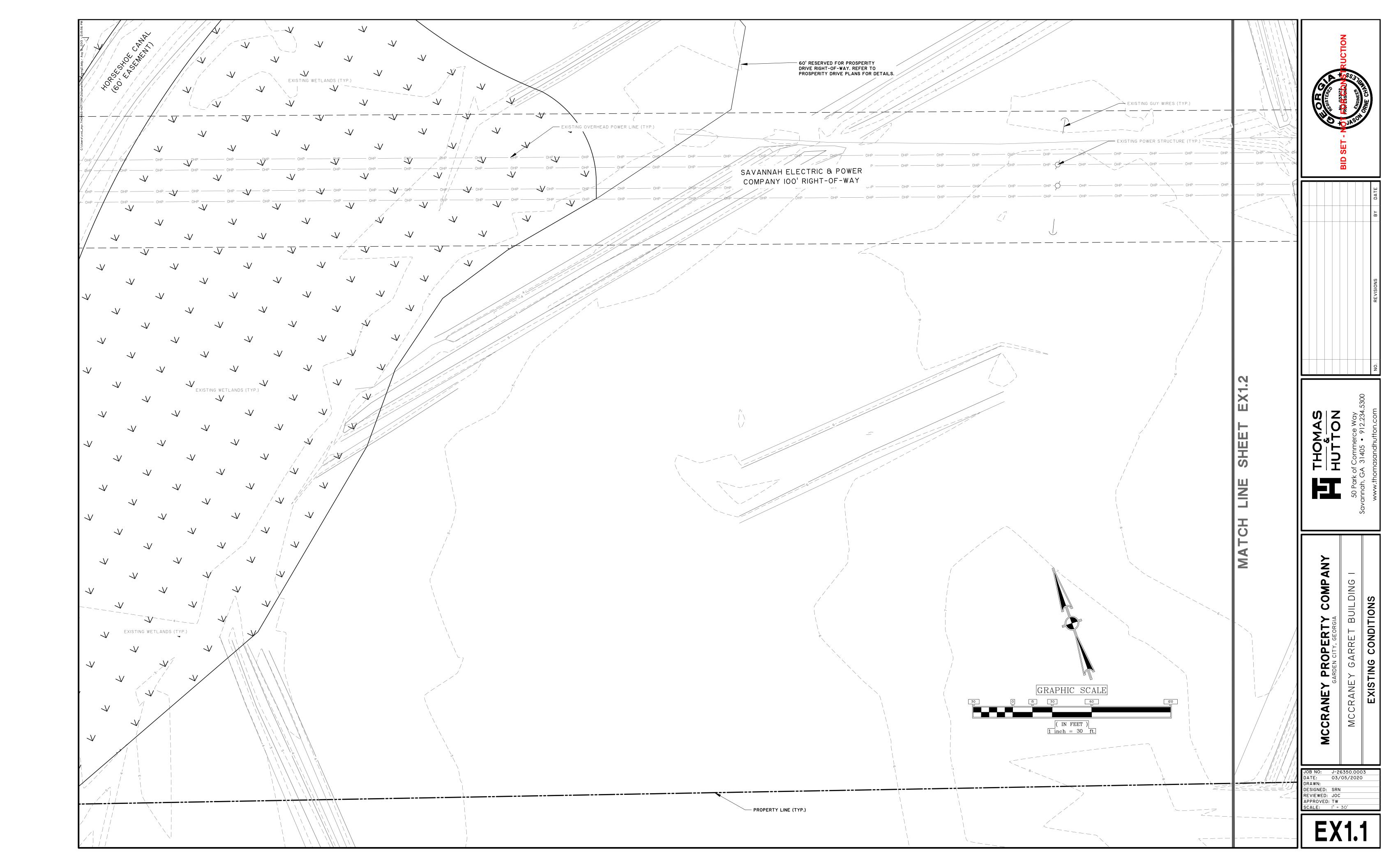
MCCRANEY 6,

JOB NO: J-26350.0003
DATE: 03/05/2020
DRAWN:
DESIGNED: SRN
REVIEWED: JOC
APPROVED: TW
SCALE: N.T.S.

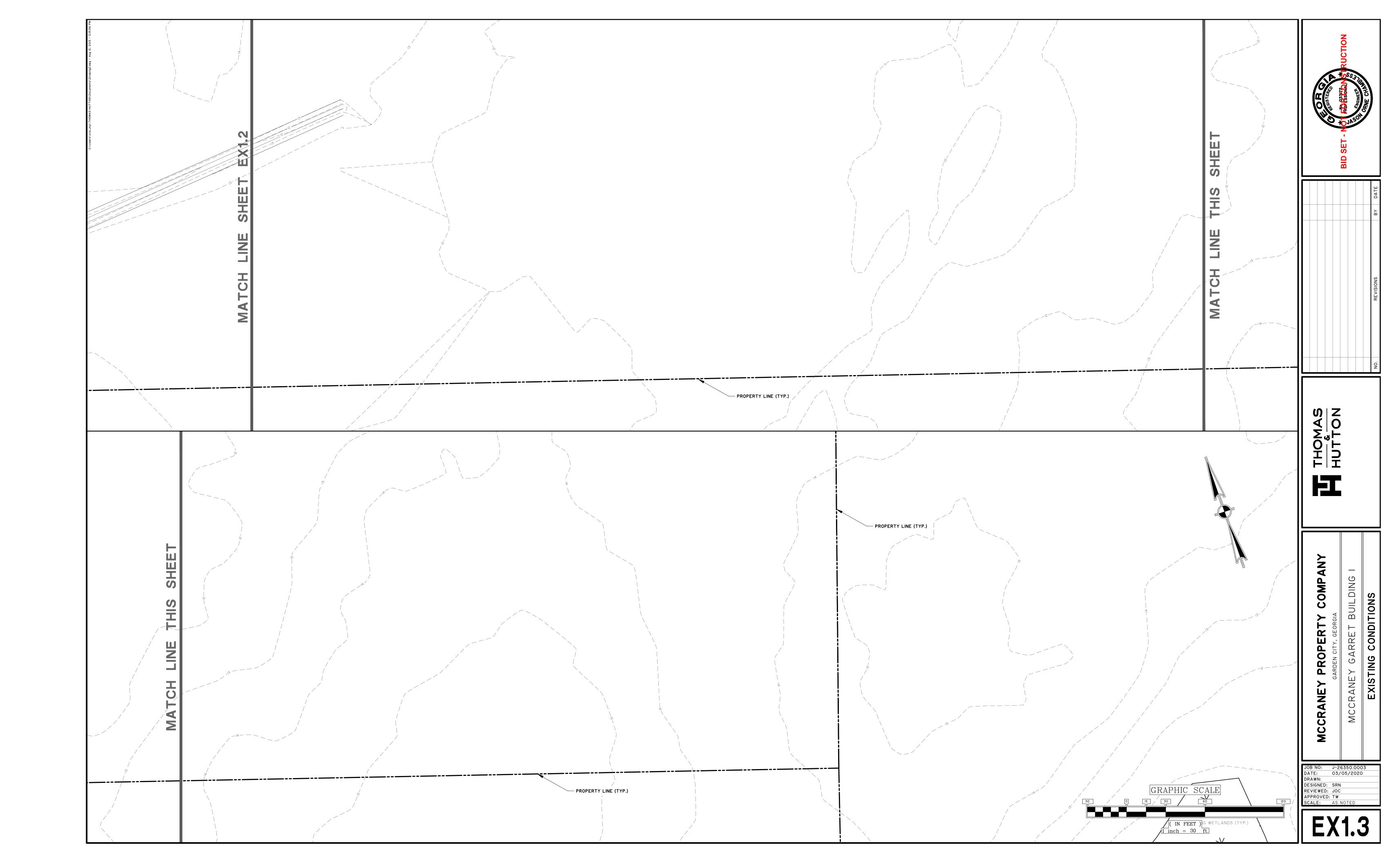
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WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE

STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

**CERTIFICATION #0000055539** 

EXPIRATION DATE: 9/12/2020

ADDRESS: PROSPERITY DRIVE, GARDEN CITY SAVANNAH GA 31408 DATE ON PLANS: <u>03/05/2020</u>

REVISED DATE:

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST -

COMMON DEVELOPMENT CONSTRUCTION PROJECTS

ECO.I YES 19. CLEARLY NOTE THE STATEMENT THAT "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES."

> THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

ECO.I YES 20.CLEARLY NOTE THE STATEMENT THAT "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."

> EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ECO.I YES 21. CLEARLY NOTE THE STATEMENT "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING." (PERMIT IV.D.3.a

> ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

22. INDICATE THAT THE APPLICABLE PORTION OF THE PRIMARY PERMITTEES ES&PC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY CONDUCTING ANY CONSTRUCTION ACTIVITY AND THAT EACH SECONDARY SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE. LIST THE NAMES AND ADDRESSES OF ALL SECONDARY PERMITTEES. (PERMIT IV.D.2.g PG 30)

NO SECONDARY PERMITTEES ARE PART OF THIS PROJECT. SHOULD THAT CHANGE, THE PRIMARY PERMITTEES ES&PC PLAN WILL BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY CONDUCTING ANY CONSTRUCTION ACTIVITY AND EACH SECONDARY SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE.

23. ANY CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN I LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT MUST COMPLY WITH PART III.C. OF THE PERMIT. INCLUDE THE COMPLETED APPENDIX I LISTING ALL THE BMP'S THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO THE IMPAIRED STREAM SEGMENT. (PART III.C.2.A - V. PG 19-21)

THE SITE IS LOCATED MORE THAN I LINEAR MILE UPSTREAM OF THE NEAREST IMPAIRED STREAM SEGMENT.

24.IF A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS BEEN FINALIZED FOR THE IMPAIRED STREAM SEGMENT (IDENTIFIED IN ITEM 23 ABOVE) AT LEAST SIX MONTHS PRIOR TO SUBMITTAL OF NOI. THE ES&PC PLAN MUST ADDRESS ANY SITE-SPECIFIC CONDITIONS OR REQUIREMENTS INCLUDED IN THE TMDL IMPLEMENTATION PLAN. (PART III.C.I PG 19)

THE CLOSEST IMPAIRED STREAM SEGMENT TO THE SITE WITHIN THE SAME WATERSHED IS SALT CREEK. DISCHARGE FOR THE SITE IS GREATER THAN I LINEAR MILE UPSTREAM OF THE CREEK.

25.BMP'S FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED. (PERMIT IV.D.3.c.(6) PG 34)

NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

ECO. YES 26. PROVIDE BMP'S FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS. (PERMIT IV.D.3.c.(5) PG 34)

> PETROLEUM BASED PRODUCTS- CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE FOR SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS. HAVE EQUIPMENT TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON MAINTENANCE AND FUELING VEHICLES. STORE IN COVERED AREAS PROTECTED WITH DIKES. REGULARLY INSPECT FOR CRACKS OR LEAKAGE IN CONTAINERS/TANKS.

### SPILL CLEANUP AND CONTROL PRACTICES

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND MEAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON

SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT I-800-424-8802.

- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

ECO.I YES 27. DESCRIPTION OF PRACTICES TO PROVIDE COVER FOR BUILDING MATERIALS AND BUILDING PRODUCTS ONSITE. (PERMIT IV.D.3.b. PG 32)

> CONTRACTOR TO PROVIDE COVER FOR BUILDING MATERIALS, PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZER, PESTICIDES, ETC. AND STORED IN A LOCATION WITH MINIMAL EXPOSURE TO STORM WATER AND SHEET COVERAGE FOR PRECIPITATION.

ECO.I YES 28.DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED.

> THE MAIN PERMANENT EROSION CONTROL PRACTICE AT THE POND DISCHARGES IS RIP-RAP. THE PONDS INCLUDE WIDE DISCHARGE POINTS OR WEIRS (25' WIDE) TO HELP SPREAD THE FLOW OVER A LARGE AREA AND TO DECREASE VELOCITIES. THE LARGEST VELOCITY DISCHARGING FROM THE PONDS IS JUST UNDER I FT/S. IN ADDITION, THE TOPOGRAPHY IS VERY FLAT WHICH HELPS MAINTAIN LOWER VELOCITIES ONCE THE RUNOFF LEAVES THE SITE. RIP-RAP IS INSTALLED ON ALL DISCHARGE ENDS OF STORM PIPE AND AT THE OUTFALL LOCATIONS. PERMANENT GRASSING AND LANDSCAPING WILL BE INSTALLED TO PROTECT EARTHEN AREAS FROM EROSION ONCE CONSTRUCTION IS COMPLETE.

ECO.I YES 29.DESCRIPTION OF THE PRACTICES THAT WILL BE USED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGES. (PERMIT IV PG 26)

POLLUTANT PREVENTION

THE FOLLOWING MATERIALS ARE EXPECTED ONSITE DURING CONSTRUCTION: PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, ADDITIVES FOR SOIL STABILIZATION, PESTICIDES, FERTILIZERS, HERBICIDES, CRUSHED STONE, CONCRETE PRODUCTS, ASPHALT, TAR, LUMBER, , PAINTS/STAINS/FINISHING TREATMENTS, PAINT SOLVENTS, CLEANING SOLVENTS, PLASTICS AND METAL PIPES. PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS FROM DISCHARGING INTO

### GOOD HOUSEKEEPING

- QUANTITIES ONSITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
- PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER'S LABELS LEGIBLE AND VISIBLE.
- PRODUCT MIXING, DISPOSAL, AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

### PRODUCT SPECIFIC PRACTICES

FERTILIZER/HERBICIDES/PESTICIDES/DETERGENTS- THESE WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS. DO NOT DISCHARGE WASH WATER INTO STORM WATER SYSTEM. INSTALL CURBS

OR DIKES AROUND STORAGE AREA TO PROTECT AGAINST SPILLS. LIMIT USE OF DETERGENTS ON-SITE. PAINTS/FINISHES/SOLVENTS- ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. CONCRETE TRUCK WASHING- NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE. BUILDING MATERIALS- NO BUILDING OR CONSTRUCTION

MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.



**| Z** 

03/05/2020 DRAWN DESIGNED: SRN REVIEWED: JOC APPROVED: TW

SCALE: N.T.S.

SWCD: COASTAL PROJECT NAME: MCCRANEY GARRET BUILDING I CITY/COUNTY: GARDEN CITY, CHATHAM COUNTY

PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE

- 3. CERTIFIED PERSONAL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (a) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE. (b) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION. AND (c) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE. THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.a.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- 4. CERTIFIED PERSONNEL (PROVIDED BY PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.e. UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
- 5. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.THE PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.4.B.(5). WHEN A SECONDARY PERMITTEE NOTIFIES THE PRIMARY PERMITTEE OF ANY PLAN DEFICIENCIES.
- 6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.a.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2 OF THIS PERMIT.

AN "EROSION & SEDIMENTATION INSPECTION AND MAINTENANCE REPORT" SHEET IS ATTACHED. SHOULD THE INSPECTION REVEAL ANY DEFICIENCIES, A COPY

SHALL BE SENT TO: MR. JASON CHAMBLESS THOMAS & HUTTON **50 PARK OF COMMERCE WAY** SAVANNAH, GA 31405

912.721.4170

ECO.2 YES 32. PROVIDE COMPLETE REQUIREMENTS OF SAMPLING FREQUENCY AND REPORTING OF SAMPLING RESULTS. (PART IV.D.6. PG 43-44 & PART IV.E PG 44-45)

ECO.2 YES 31. PROVIDE COMPLETE REQUIREMENTS OF INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITEE (PART IV.D.4.a - c PG 34-40)

CONSTRUCTION SCHEDULE

5

3

ECO.2 YES 30.DESCRIPTION AND CHART OR TIMELINE OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH

TEMPORARY AND FINAL STABILIZATION). (PERMIT IV.D.2.b PG 30)

CONTROL MEASURES.

PLANNED SCHEDULE.

APPLICABLE PERMITS.

CONSTRUCTION.

CONSTRUCTION ACTIVITY |

I. OBTAIN ALL PLAN APPROVALS AND OTHER

2. FLAG THE WORK LIMITS AND MARK THE

LEAST ONE WEEK PRIOR TO STARTING

FNTRANCE, CONSTRUCTION ROUTES.

6. RUNOFF CONTROL - DIVERSIONS,

EQUIPMENT PARKING AREAS.

TREES AND BUFFER AREAS FOR PROTECTION.

3. HOLD PRE CONSTRUCTION CONFERENCE AT

4. CONSTRUCTION ACCESS - CONSTRUCTION

5. SEDIMENT TRAPS AND BARRIERS - BASIN

PERIMETER DIKES, WATER BARS, AND OUTLET

7. RUNOFF CONVEYANCE SYSTEM- STABILIZE

STREAM BANKS, STORM DRAINS, CHANNELS,

INLET AND OUTLET PROTECTION, SLOPE

8. LAND CLEARING AND GRADING - SITE

GRADING, SEDIMENTATION TRAPS, BARRIERS,

9. SURFACE STABILIZATION - TEMPORARY AND

DIVERSIONS, DRAINS, SURFACE ROUGHENING.

PERMANENT SEEDING, MULCHING, SODDING,

IO. BUILDING CONSTRUCTION- BUILDINGS

SEEDING, MULCHING, SODDING RIPRAP.

II. LANDSCAPING AND FINAL STABILIZATION -

TOPSOILING, TREES AND SHRUBS, PERMANENT

UTILITIES, PAVING.

ACTIVITY

PERIMETER BMPS

TEMPORARY SEDIMENT

TEMPORARY GRASSING

UTILITY INSTALLATION

**ROAD CONSTRUCTION** 

PERMANENT GRASSING

FINAL STABILIZATION/

BMP MAINTENANCE

SITE CLEARING

CONTROL BMPS

SITE GRADING

SITE PAVING

CONSTRUCTION

BMP REMOVAL

BUILDING

PREPARATION CUTTING, FILLING AND

TRAPS, SEDIMENT FENCES, AND OUTLET

DISTURB SOILS FOR THE MAJOR PORTIONS OF THE SITE (I.E., INITIAL PERIMETER AND SEDIMENT

STORAGE BMP'S, CLEARING AND GRUBBING ACTIVITIES, EXCAVATION ACTIVITIES, UTILITY ACTIVITIES,

A SPECIFIED WORK SCHEDULE IS NEEDED TO COORDINATE THE TIMING OF LAND

DISTURBING ACTIVITIES WITH THE INSTALLATION OF EROSION AND SEDIMENTATION

THE PURPOSE OF THE SCHEDULE IS TO REDUCE ON-SITE EROSION AND OFF-SITE

SEDIMENTATION BY PERFORMING LAND DISTURBING ACTIVITIES AND INSTALLING

IN PLANNING CONSTRUCTION WORK, IT MAY BE HELPFUL TO OUTLINE ALL LAND

THEN LIST ALL PRACTICES NEEDED TO CONTROL EROSION AND SEDIMENTATION

ON THE SITE. THESE TWO LISTS CAN THEN BE COMBINED IN LOGICAL ORDER TO

TAKES PLACE.

DURING GRADING.

SCHEDULE CONSIDERATION

FIRST LAND DISTURBING ACTIVITY - STABILIZE

BARE AREAS IMMEDIATELY WITH GRAVEL AND

TEMPORARY VEGETATION AS CONSTRUCTION

CONSTRUCTION SITE IS ACCESSED. INSTALL

INSTALL KEY PRACTICES AFTER PRINCIPAL

INSTALL ADDITIONAL RUNOFF-CONTROL

MEASURES DURING GRADING.

SYSTEM AFTER GRADING.

FOR PRESERVATION

DELAYED OR COMPLETE.

WORK TAKES PLACE

SEDIMENT TRAPS AND BEFORE LAND GRADING.

WHERE NECESSARY, STABILIZE STREAM BANKS

AS EARLY AS POSSIBLE. INSTALL PRINCIPAL

RUNOFF CONVEYANCE SYSTEM WITH RUNOFF

BEGIN MAJOR CLEARING AND GRADING AFTER

CONTROL MEASURES ARE INSTALLED, INSTALL

ADDITIONAL CONTROL MEASURES AS GRADING

STABILIZATION MEASURES IMMEDIATELY ON

ALL DISTURBED AREAS WHERE WORK IS

SEDIMENTATION CONTROL PRACTICES AS

LAST CONSTRUCTION PHASE--STABILIZE ALL

OPEN AREAS, INCLUDING BORROW AND SPOIL

PROGRESSES. MARK TREES AND BUFFER AREAS

PRINCIPAL SEDIMENT AND KEY RUNOFF -

APPLY TEMPORARY OR PERMANENT

INSTALL NECESSARY EROSION AND

AREAS, REMOVE AND STABILIZE ALL

TEMPORARY CONTROL MEASURES.

CONTROL MEASURES. INSTALL REMAINDER OF

ADDITIONAL TRAPS AND BARRIERS AS NEEDED

INSTALL PRINCIPAL BASINS AFTER

PROVIDE A PRACTICAL AND EFFECTIVE CONSTRUCTION SEQUENCE SCHEDULE

THAT BECOMES PART OF THE EROSION AND SEDIMENTATION CONTROL PLAN.

DISTURBING ACTIVITIES NECESSARY TO COMPLETE THE PROPOSED PROJECT.

EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH A

INSPECTIONS AND RECORD KEEPING

- PRIMARY PERMITTEE:
- I. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (a) ALL AREAS OF THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT. (b) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- 2. MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS

DISTURBANCE EQUAL TO OR GREATER THAN ONE (I) ACRE AND TERTIARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES. THIS SECTION IS NOT APPLICABLE TO SECONDARY PERMITTEES. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN

RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS

SECTION IS APPLICABLE TO PRIMARY PERMITTEES WITH A TOTAL PLANNED

(I) A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (a) THE LOCATION OF ALL PERENNIAL AND

SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORM WATER IS DISCHARGED AND (b) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC

ADDRESS: PROSPERITY DRIVE, GARDEN CITY, GA 31408 DATE ON PLANS: <u>03/05/2020</u> REVISED DATE:

> MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION FOR THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORM WATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

- (2) THE ANALYTICAL METHOD USED TO COLLECT AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;
- (3) WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX b. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND
- (4) ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.
- SAMPLE TYPE. ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.
- I. SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES
- 2. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY
- 3. LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
- 4. MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
- 5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THE PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E. OF THE PERMIT.
- <u>SAMPLING POINTS:</u> THERE WILL BE I STORM WATER SAMPLING LOCATION. THE SAMPLING LOCATION WILL BE THE DOWNSTREAM POINT, PER NPDES PERMIT GAR 100003, FOR CONSTRUCTION ACTIVITIES, THE PRIMARY PERMITTEE MUST COMPLETE ALL SAMPLING.
- I. FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (I) ACRE AND TERTIARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:
- A. THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY, WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
- THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.
- C. IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNELS(S).
- D. CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING
- THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
- PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A

CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

H. ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

### SAMPLING FREQUENCY

- I. THE PRIMARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (I) ACRE AND TERTIARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
- 2. HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER
- 3. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING **EVENTS:**
- A. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;
- B. IN ADDITION TO (A.) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THE PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATIONS, WHICHEVER COMES FIRST;
- C. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE. IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS\* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
- D. WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.a.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND
- E. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

\*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

### <u>REPORTING</u>

THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORT SHALL INCLUDE THE FOLLOWING INFORMATION:

- THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAMES(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;



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03/05/2020 DRAWN DESIGNED: SRN REVIEWED: JOC APPROVED: TW

SCALE: N.T.S.

SWCD: COASTAL PROJECT NAME: MCCRANEY GARRET BUILDING I CITY/COUNTY: GARDEN CITY. CHATHAM COUNTY

ADDRESS: PROSPERITY DRIVE, GARDEN CITY, GA 31408 DATE ON PLANS: <u>03/05/2020</u> REVISED DATE:

RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND

CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE APPLICABLE PERMITTEES SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

**EPD OFFICE:** 

COASTAL DISTRICT - BRUNSWICK OFFICE GEORGIA ENVIRONMENTAL PROTECTION DIVISION **400 COMMERCE CENTER DRIVE** 

BRUNSWICK, GA 31523-8687

264-7284

ECO.3 YES 33. PROVIDE COMPLETE DETAILS FOR RETENTION OF RECORDS AS PER PART IV.F PG 45 OF THE

### RETENTION OF RECORDS

I. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI.

- COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD.
- A COPY OF THE ES&PC PLAN REQUIRED IN PERMIT No. GAR 100003.
- THE DESIGN PROFESSIONALS REPORT OF THE THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5 IN **PERMIT**

No. GAR 100003.

• A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY IN PERMIT No. GAR 100003.

A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE

- WITH PART IV.D.4.a OF PERMIT No. GAR 100003. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY
- REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2 IN PERMIT No. GAR 100003.
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.a.(2). IN PERMIT No. GAR 100003.
- 2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE GARIOOOO3. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

ECO.3 YES 34.DESCRIPTION OF ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE THE SAMPLES FROM EACH LOCATION. (PERMIT IV.D.6.a - c. PG 40-42)

> STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT EPA 833-8-92-001.

ECI.I - 3.3 YES 35. APPENDIX B RATIONALE FOR NTU VALUES AT ALL OUTFALL SAMPLING POINTS WHERE APPLICABLE. (PERMIT IV.D.6.A.(3) PG 40)

> STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATIONS. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 70, THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT No. GAR 100003. THE NTU IS BASED UPON THE DISTURBED ACREAGE OF 17.94 ACRES FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA OF LESS THAN 4.99 SQUARE MILES AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES. APPENDIX B WAS USED TO DETERMINE THE NTU ALLOWABLE AND DOWNSTREAM SAMPLING WILL BE PERFORMED FOR THIS PROJECT. Appendix B

Nephelometric Turbidty Unit (NTU) Table Warm Water (Suppoting Warm Water Fisheries)

	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500
1.00-10	75	150	200	400	750	750	750	750
0.01-25	<u>(50)</u>	100	100	200	300	500	750	750
5.01-50	50	50	100	100	200	300	750	750
0.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100
	1							

Surface Water Drainage Area, square miles

ECI.1-3.3 YES 36.DELINEATE ALL SAMPLING LOCATIONS, PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.(PERMIT IV.D.6.a.(I) PG 40)

> PLEASE SEE PLAN SHEETS FOR DELINEATION OF SAMPLING LOCATIONS, PERENNIAL, INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

ECO.3 YES 37.A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE INCLUDING (I) INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S, (2) INTERMEDIATE GRADING AND DRAINAGE BMP'S, AND (3) FINAL BMP'S. FOR CONSTRUCTION SITES WHERE THERE WILL BE NO MASS GRADING AND THE INITIAL PERIMETER CONTROL BMP'S, INTERMEDIATE GRADING AND DRAINAGE BMP'S, AND FINAL BMP'S ARE THE SAME, THE PLAN MAY COMBINE ALL OF THE BMP'S INTO A SINGLE PHASE. (PERMIT IV.D.3. PG 30)

> INITIAL PHASE - THE INITIAL PHASE OF THE ES&PC PLAN WILL INCLUDE THE INSTALLATION OF THE CONSTRUCTION EXIT AND SILT FENCE. TYPE NS & S SILT FENCE WILL BE USED IN CONJUNCTION WITH THE EXISTING SILT FENCE INSTALLED DURING THE MASS GRADING OF THE DEVELOPMENT. EXISTING BMPS SHALL BE MAINTAINED DURING ALL PHASES. STORM PONDS AND DITCHES WILL BE CONSTRUCTED AND MAINTAINED DURING SITE CLEARING. ACCOMPANYING DRAINAGE STRUCTURES AND PIPE, SLOTTED BOARD DAM WITH STONE, CHECK DAMS, STORM DRAIN OUTLET PROTECTION SHALL BE PROVIDED TO ENSURE POND FUNCTIONALITY AND SEDIMENT CONTROL. DUST CONTROL, MULCHING AND TEMPORARY SEEDING WILL BE IMPLEMENTED AS NECESSARY.

> INTERMEDIATE PHASE - THE INTERMEDIATE PHASE OF THE ES&PC PLAN WILL INCLUDE THE MAINTENANCE OF ALL BMPS IN PLACE DURING THE INITIAL PHASE. SEDIMENT INLET TRAPS WILL BE INSTALLED AND MAINTAINED AS INDICATED ON THE PLANS. DUST CONTROL, MULCHING, AND TEMPORARY SEEDING WILL BE IMPLEMENTED AS NECESSARY.

FINAL PHASE - THE FINAL PHASE OF THE ES&PC PLAN WILL INCLUDE THE MAINTENANCE OF ALL BMPS IN PLACE DURING THE INITIAL AND IMMEDIATE PHASES. SEDIMENT INLET TRAPS WILL BE INSTALLED AND MAINTAINED AS INDICATED ON THE PLANS. PERMANENT SEEDING WILL BE IMPLEMENTED FOR SITE STABILIZATION. ONCE THE SITE IS STABILIZED, ALL TEMPORARY BMPS ARE TO BE REMOVED.

ECO.3 YES 38.PLAN ADDRESSES BMPS FOR ALL PHASES OF COMMON DEVELOPMENT INCLUDING INDIVIDUAL BUILDING LOTS AND OUT-PARCELS, ETC. REGARDLESS OF WHO OWNS OR OPERATES THE INDIVIDUAL SITES. INCLUDE A TYPICAL AND ANY SITUATIONAL LOTS APPLICABLE.

> AT THIS TIME, PRIMARY PERMITTEE WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ACTIVITY ON THE SITE. IF IT BECOMES NECESSARY FOR A SECONDARY PERMITTEE TO BEGIN CONSTRUCTION ACTIVITIES ON THE SITE, PLANS FOR TYPICAL AND SITUATIONAL LOTS WILL BE SUBMITTED AS APPLICABLE PRIOR TO THE SECONDARY CONDUCTING ANY CONSTRUCTION ACTIVITY.

ALL YES 39.GRAPHIC SCALE AND NORTH ARROW.

GRAPHIC SCALE AND NORTH ARROW ARE LOCATED ON EACH PLAN SHEET.

ECI.I - 3.4 YES 40.EXISTING AND PROPOSED CONTOUR LINES WITH CONTOUR LINES DRAWN AT AN INTERVAL IN ACCORDANCE WITH THE FOLLOWING:

> EXISTING AND PROPOSED CONTOUR LINES DRAWN AT AN INTERVAL OF I' ARE SHOWN ON EACH PLAN SHEET.

N/A 41. USE OF ALTERNATIVE BMP'S WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMP'S AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY EPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE DOCUMENT FOUND AT www.gaswcc.org. (PERMIT IV.D.3.a.(4) PG 32)

ALTERNATIVE BMPS WILL NOT BE USED AS PART OF THIS PROJECT.

42.USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. PLEASE REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA 2016

ALTERNATIVE BMPS WILL NOT BE USED AS PART OF THIS PROJECT.

N/A 43.DELINEATION OF THE APPLICABLE 25-FOOT OR 50-FOOT UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY. CLEARLY NOTE AND DELINEATE ALL AREAS OF IMPACT. (PERMIT IV.D.e PG 30)

THERE ARE NO BUFFERS ASSOCIATED WITH THIS PROJECT.

ECO.3 YES 44.DELINEATION OF ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE.

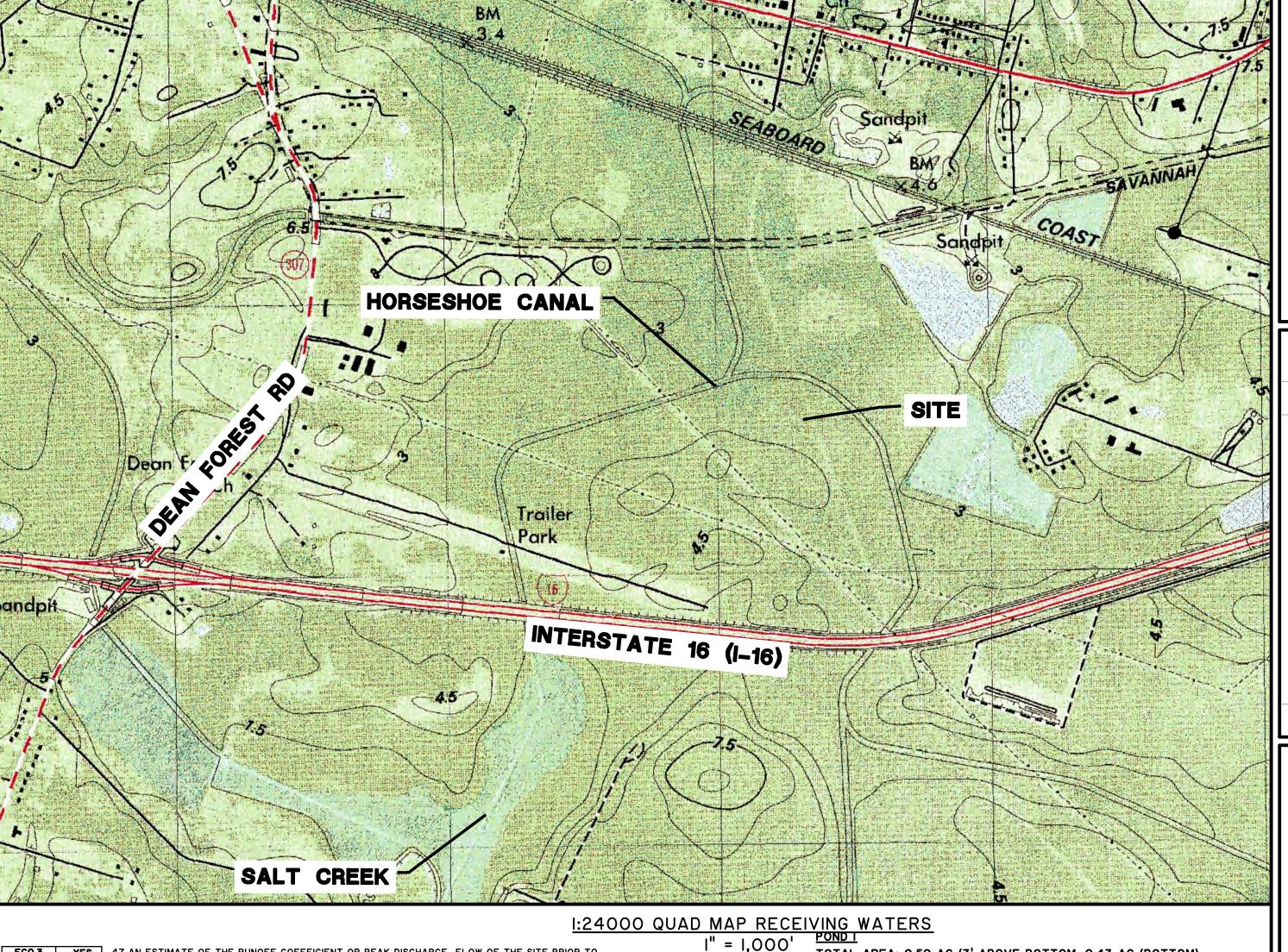
> ALL WETLANDS AND STATE WATERS WITHIN 200 FEET OF THE PROJECT SITE ARE DELINEATED ON THE PLANS.

ECO.3 YES 45. DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE. (PERMIT IV.D.2.e PG 30)

> ALL CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE ARE CLEARLY DELINEATED ON IN THE PLANS. THEY ARE ALSO INCLUDED IN AN EXHIBIT AS PART OF THE ATTACHED STORM WATER REPORT.

ATTACHED YES 46.PROVIDE HYDROLOGY STUDY AND MAPS OF DRAINAGE BASINS FOR BOTH PRE- AND POST-DEVELOPED CONDITIONS.

> PLEASE SEE ATTACHED REPORT WITH DETAILS FOR PRE AND POST DEVELOPMENT HYDROLOGY.



ECO.3 YES 47.AN ESTIMATE OF THE RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOW OF THE SITE PRIOR TO AND AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED. (PERMIT IV.D.2.d. PG 30)

> **RUNOFF COEFFICIENT:** PRE-CONSTRUCTION CN = 77 POST-CONSTRUCTION CN = 93

EC2.I - 3.3 YES 48.STORM-DRAIN PIPE AND WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION TO ACCOMMODATE DISCHARGES WITHOUT EROSION. IDENTIFY/DELINEATE ALL STORM WATER DISCHARGE POINTS.

> THE RIP-RAP CHARTS ON THE PLANS CONTAIN THE STORMWATER VELOCITIES. THE STORMWATER DISCHARGE POINTS ARE INDICATED ON THE PLANS.

ECO.3 YES 49. SOIL SERIES FOR THE PROJECT SITE AND THEIR DELINEATION.

SOILS ARE DELINEATED ON THE EROSION CONTROL SHEETS. THE SOILS FOR THE SITE ARE Cc - CAPE FEAR (C/D), Pn - POOLER FINE SANDY LOAM (C/D).

**ECI.I - 3.3** YES 50. THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION.

PLEASE SEE THE PLAN FOR THE DELINEATION OF THE LIMITS OF DISTURBANCE.

ECO.3 YES 51. PROVIDE A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED USING A TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED INLET SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. A WRITTEN JUSTIFICATION EXPLAINING THE DECISION TO USE EQUIVALENT CONTROLS WHEN A SEDIMENT BASIN IS NOT ATTAINABLE MUST BE INCLUDED IN THE PLAN FOR EACH COMMON DRAINAGE LOCATION IN WHICH A SEDIMENT BASIN IS NOT PROVIDED. A WRITTEN JUSTIFICATION AS TO WHY 67 CUBIC YARDS OF STORAGE IS NOT ATTAINABLE MUST ALSO BE GIVEN. WORKSHEETS FROM THE MANUAL MUST BE INCLUDED FOR STRUCTURAL BMPs AND ALL CALCULATIONS USED BY THE STORAGE DESIGN PROFESSIONAL TO OBTAIN THE REQUIRED SEDIMENT STORAGE WHEN USING EQUIVALENT CONTROLS. WHEN DISCHARGING FROM SEDIMENT BASINS AND IMPOUNDMENTS, PERMITEES ARE REQUIRED TO UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE, UNLESS INFEASIBLE. IF OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE ARE NOT FEASIBLE, A WRITTEN JUSTIFICATION EXPLAINING THIS DECISION MUST BE INCLUDED IN THE PLAN. (PERMIT IV.D.3.a.(3) PG 3I)

> SEDIMENT STORAGE - THE PERMIT REQUIRES A MINIMUM OF 134 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED.

> > =17.94 AC X 134 CY/AC = 2.404 CY

THE SEDIMENT STORAGE REQUIREMENT WILL BE ACHIEVED BY UTILIZING THE ROAD SIDE SWALES AND RETROFIT. SEDIMENT STORAGE REQUIRED ACREAGE = 17.94 REQUIRED ON SITE SEDIMENT STORAGE

TOTAL AREA: 0.59 AC (3' ABOVE BOTTOM, 0.43 AC (BOTTOM) (0.5(0.59 + 0.43) AC \* 43,560 SF/AC \* 3FT)/27 = 2,468 CY

> TOTAL SEDIMENT STORAGE PROVIDED (2,468 CY) EXCEEDS STORAGE REQUIRED (2,404 CY)

ECI.I - 3.3 YES 52.LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. USE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6, WITH LEGEND.

> PLEASE SEE THE PLAN SHEETS FOR THE LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA USING THE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6 WITH ACCOMPANYING LEGEND.

EC4.1 - 4.2 YES 53. PROVIDE DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES. SPECIFICATIONS MUST, AT A MINIMUM, MEET THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

> PLEASE SEE THE DETAIL SHEET FOR DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES WITH SPECIFICATIONS MEETING THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA

EC4.1 - 4.2 YES 54.PROVIDE VEGETATIVE PLAN, NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES. INCLUDE SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. VEGETATIVE PLAN SHALL BE SITE SPECIFIC FOR APPROPRIATE TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR THE APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

> PLEASE SEE THE PLAN AND DETAIL SHEETS FOR THE VEGETATIVE PLAN NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES INCLUDING SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. THIS PLAN IS SPECIFIC TO THE SITE AND APPROPRIATE FOR TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR THE APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

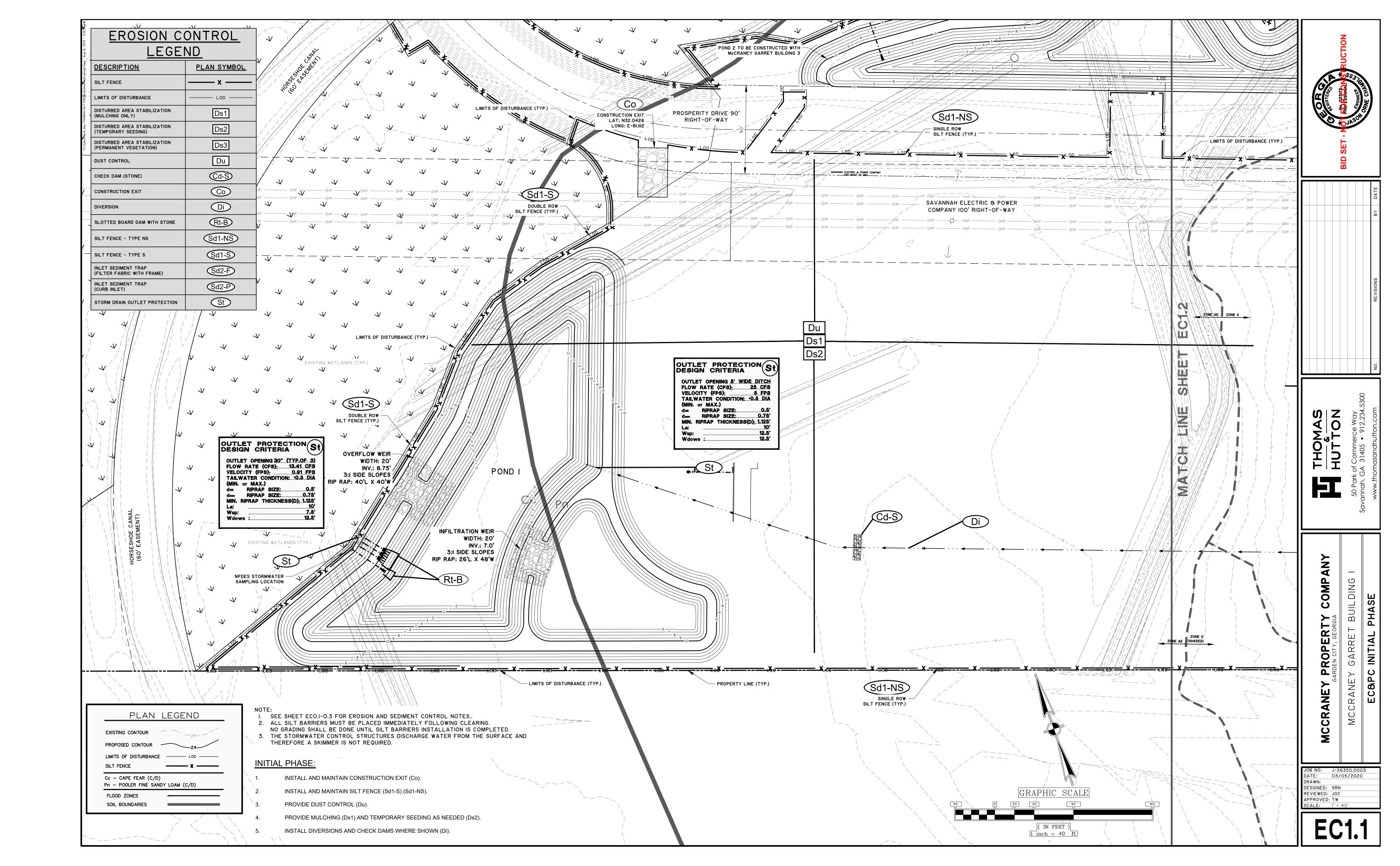
> > EFFECTIVE JANUARY I, 2020

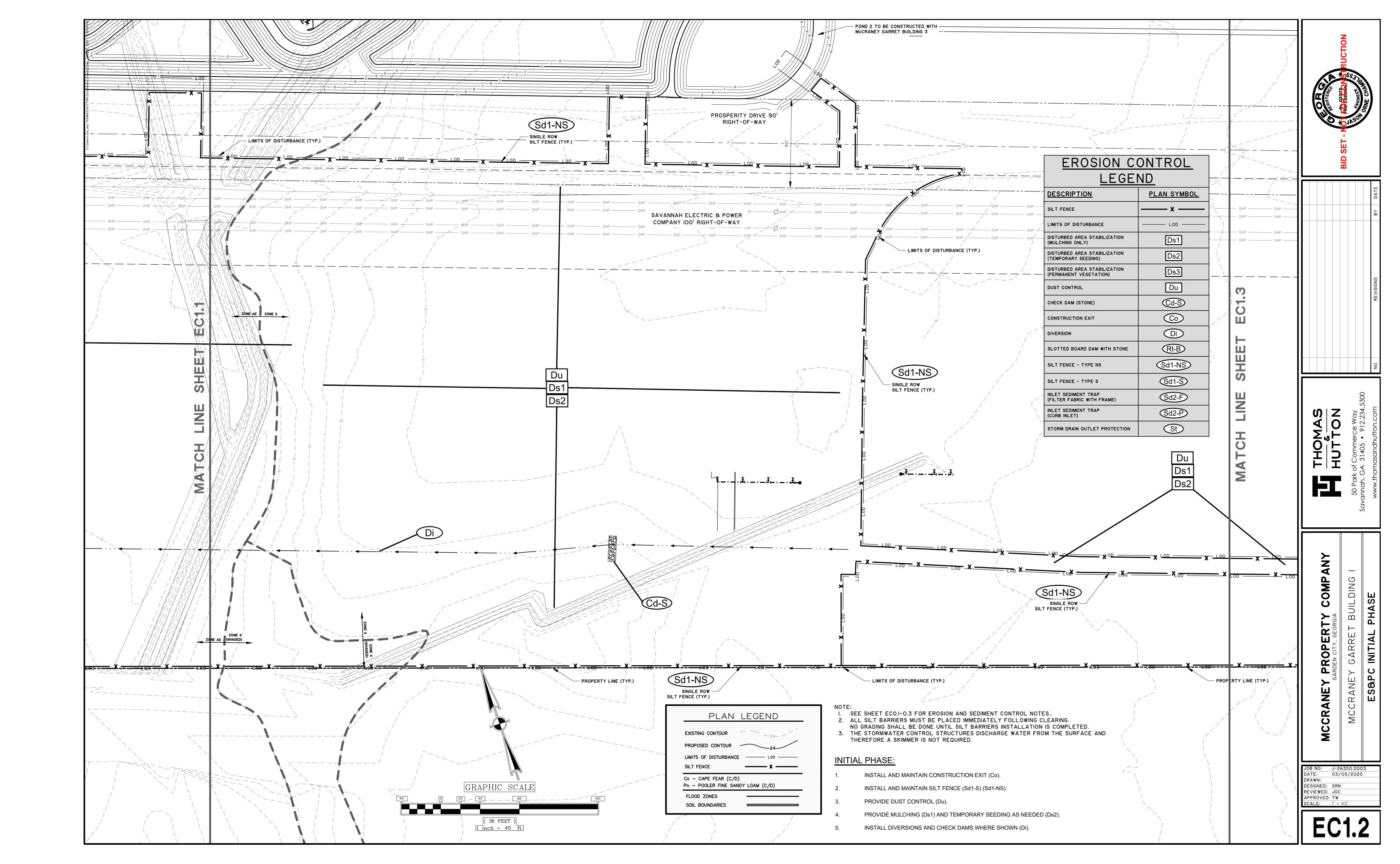
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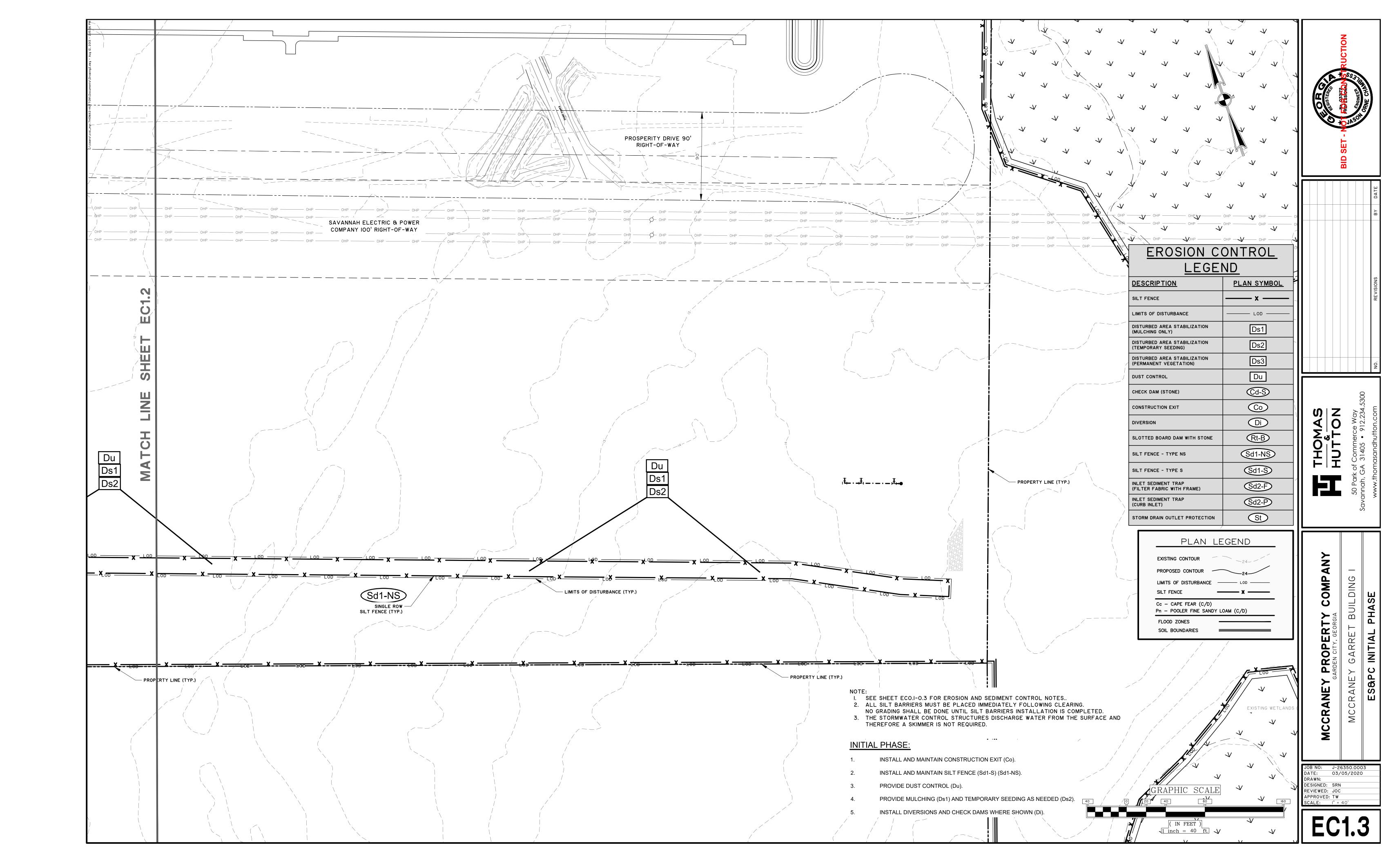
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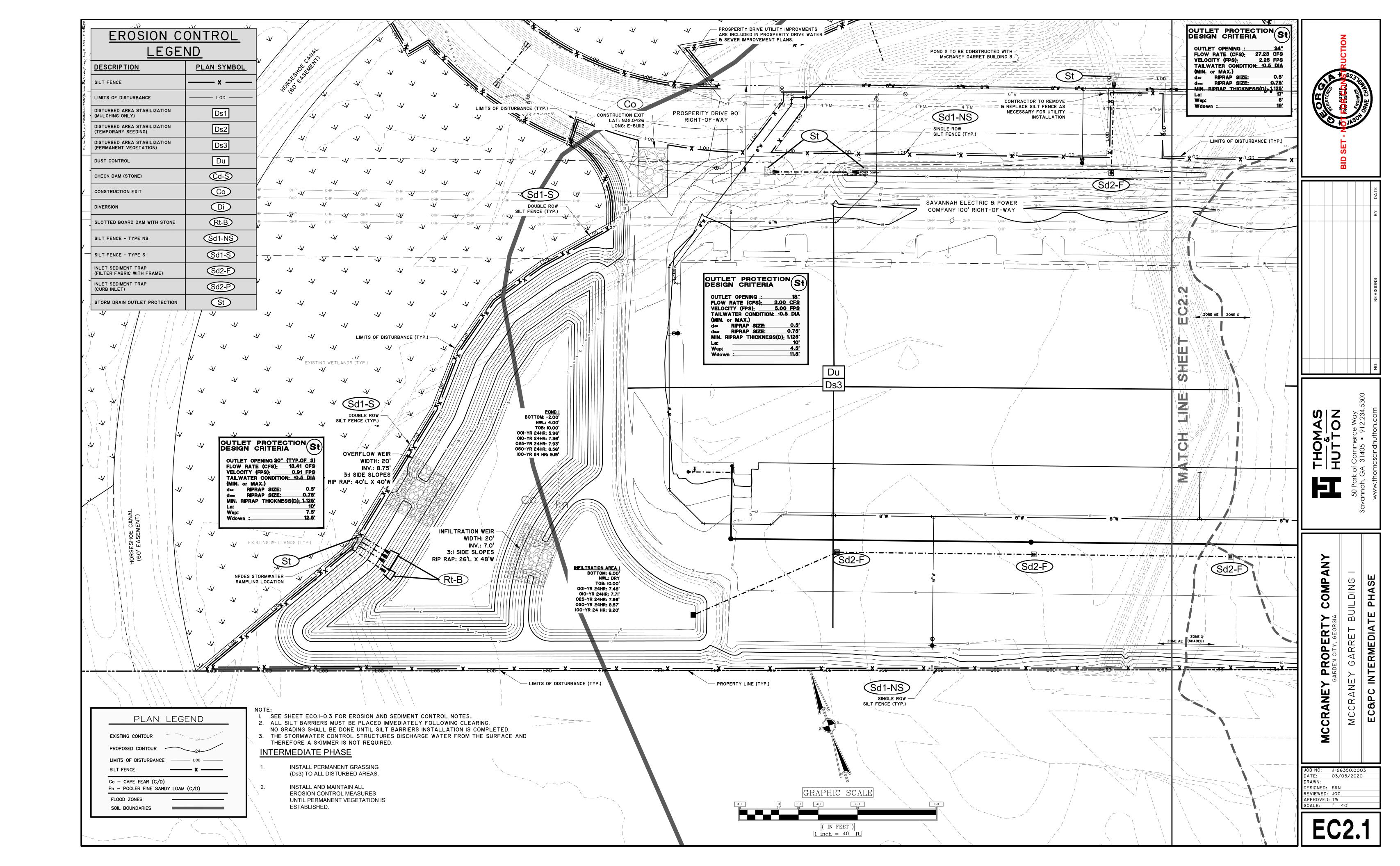
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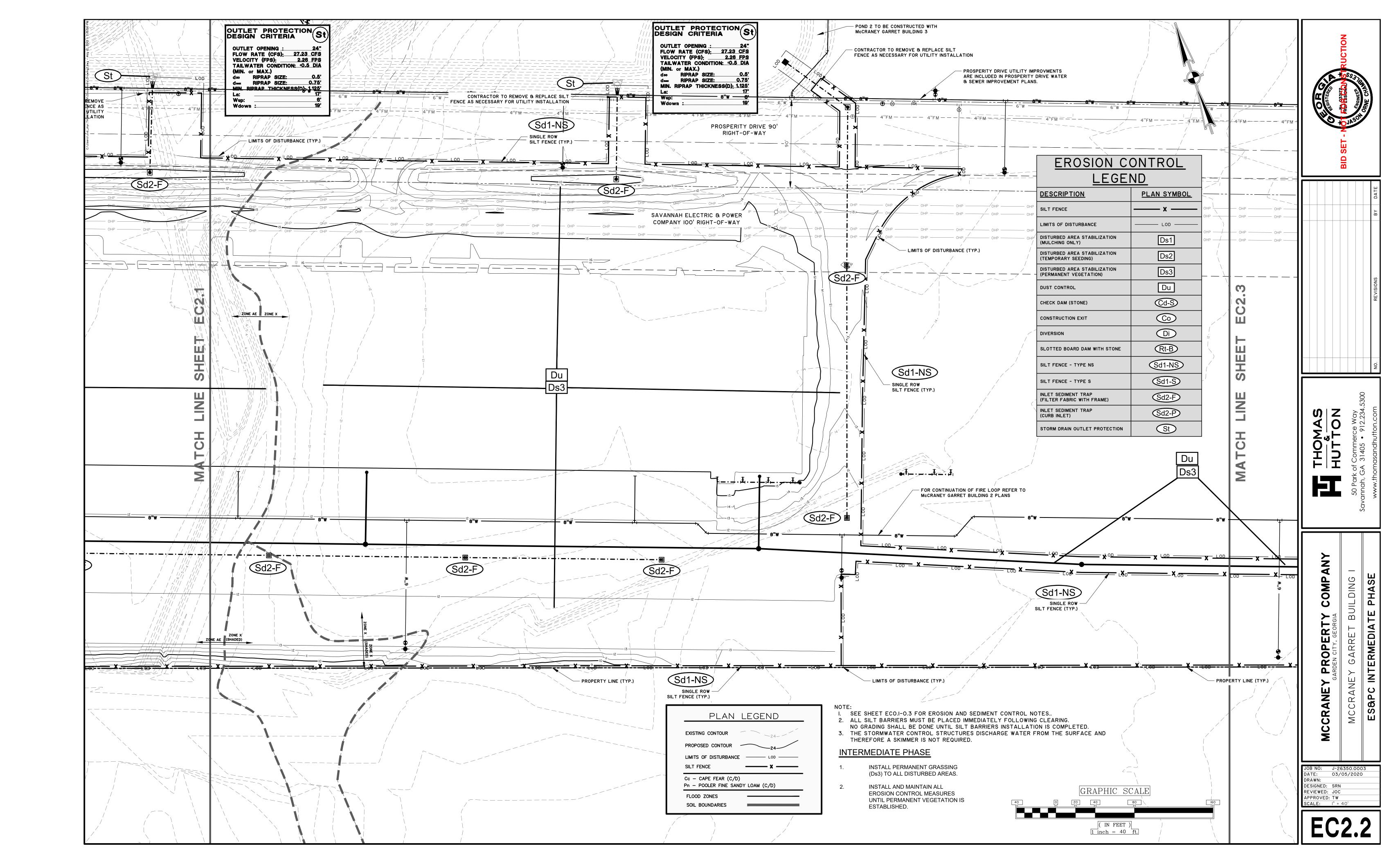
03/05/2020 DRAWN: DESIGNED: SRN REVIEWED: JOC APPROVED: TW

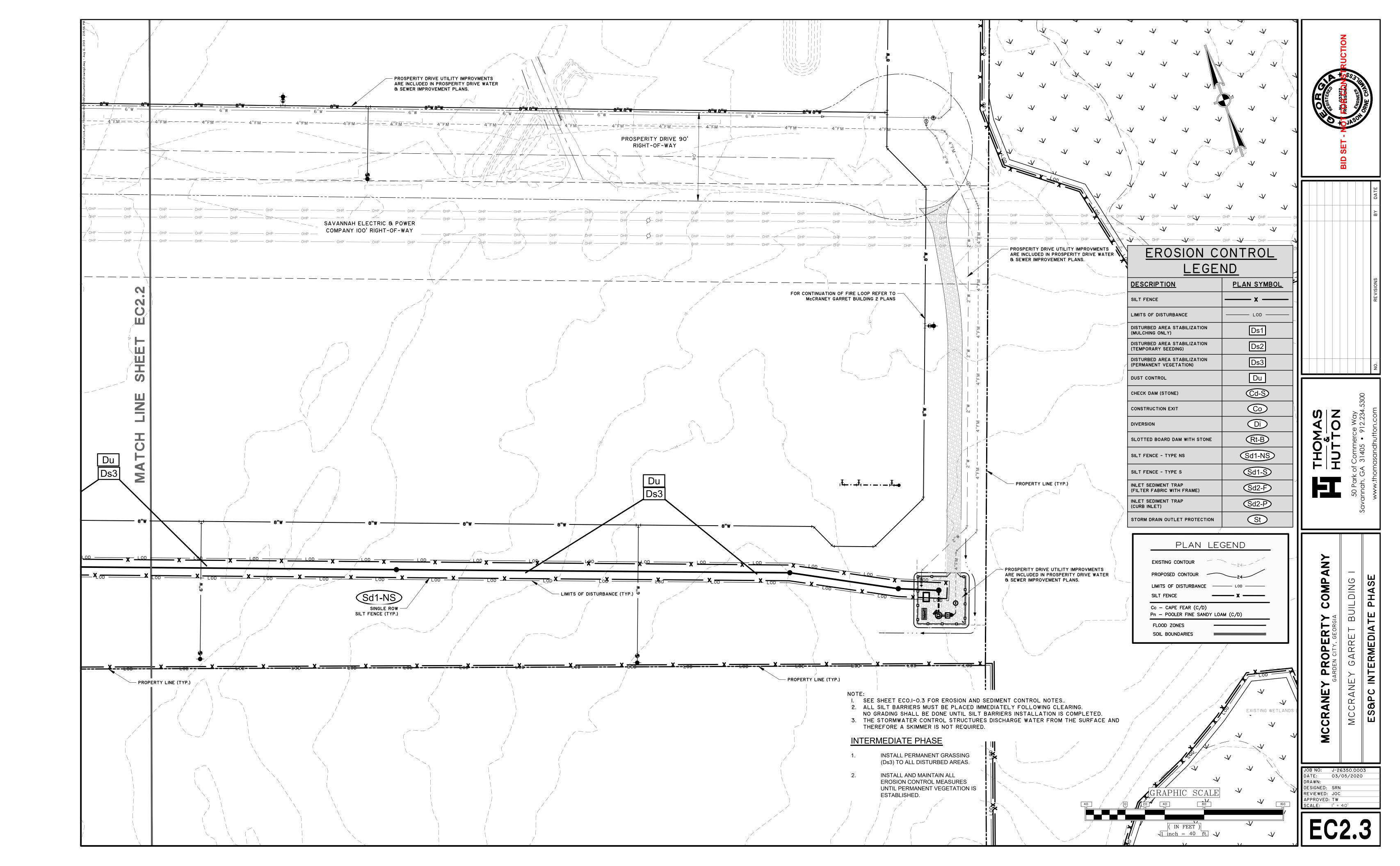


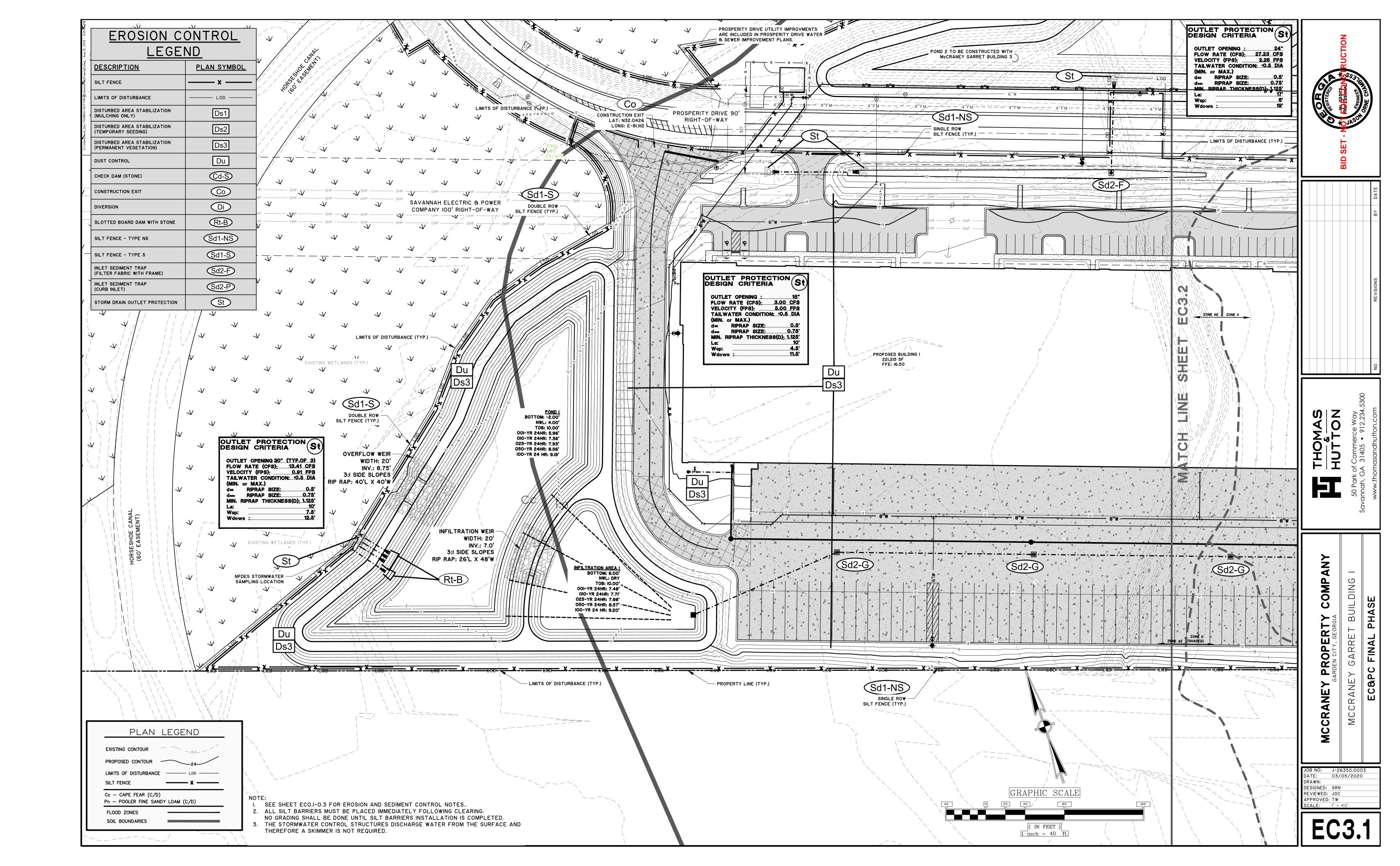


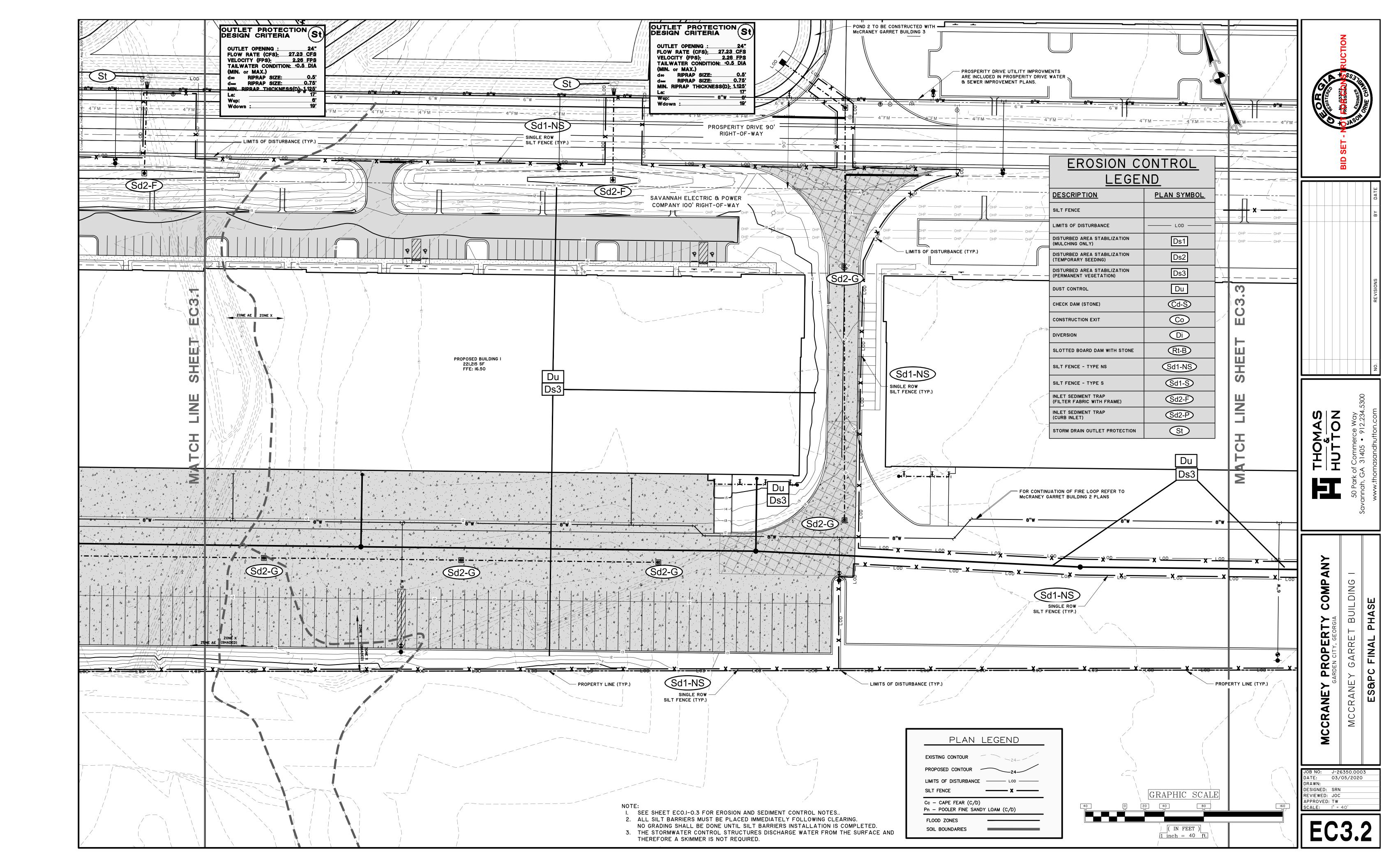












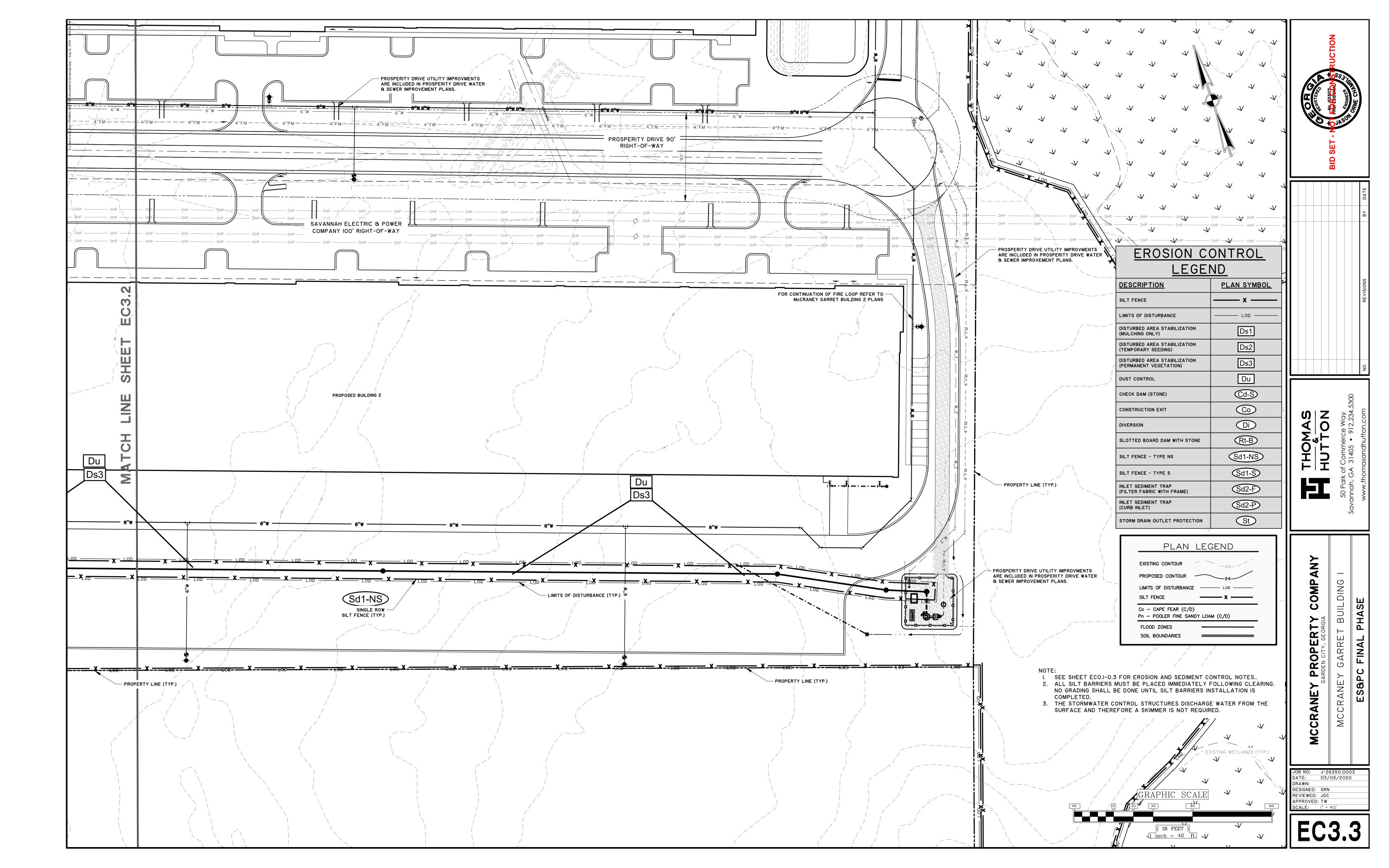


Table 2. I citilized requirements for temporary vegetation					
Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	N Top Dressing Rate (lbs./acre)	
Cool season grasses	First	6-12-12	1500	50-100	
	Second	6-12-12	1000		
	Maintenance	10-10-10	400	30	
Cool seasn grasses & legumes	First	6-12-12	1500	0-50	
	Second	0-10-10	1000		
	Maintenance	0-10-10	400		
Temporary cover crops seeded alone First		10-10-10	500	30	
Warm season grasses	First	6-12-12	1500	50-100	
	Second	6-12-12	800	50-100	
	Maintenance	10-10-10	400	30	

RATE PER ACRE

SEEDED ADDED ALONE TO MIX

30 lbs.

6 lbs.

30 lbs.

2 lbs.

30 lbs.

6 lbs.

2 lbs.

6 lbs.

2 lbs.

6 lbs.

2 lbs.

RATE PER ACRE

SEEDED ADDED

ALONE TO MIX

60 lbs. 30 lbs.

60 lbs. 30 lbs.

6 lbs.

75 lbs.

75 lbs.

60 lbs.

75 lbs.

75 lbs.

4 lbs.

IO lbs.

75 lbs. 4 lbs.

4 lbs.

75 lbs.

 Apply agricultural lime at the rate determined by soil test pH.

COVER

BAHIA, PENSACOLA

CENTIPEDE, SOD

IO Ibs. \* BAHIA, PENSACOLA

BERMUDA, UNHULLED

CENTIPEDE, SOD LESPEDEZA, SERICEA

LESPEDEZA, SEDICEA \* LESPEDEZA, SEDICEA

LOVEGRASS, WEEPING

BAHIA, PENSACOLA

CENTIPEDE, SOD

BERMUDA, UNHULLED

LESPEDEZA, SEDICEA

LESPEDEZA, SEDICEA

LOVEGRASS, WEEPING

LOVEGRASS, WEEPING

LESPEDEZA, SEDICEA

LESPEDEZA, SEDICEA

LOVEGRASS, WEEPING

BAHIA, PENSACOLA

BERMUDA, HULLED

BAHIA, PENSACOLA

\* BERMUDA, UNHULLED

: LESPEDEZA, SEDICEA

PERMANENT

COVER

\* BAHIA, PENSACOLA

\* BAHIA, PENSACOLA

\* LESPEDEZA, SEDICEA

LESPEDEZA, SEDICEA

BERMUDA, UNHULLED

LESPEDEZA, SEDICEA 1 | 75 lbs.

LESPEDEZA, SEDICEA 1 | 75 lbs.

CENTIPEDE, SOD

\* BAHIA, PENSACOLA BERMUDA, UNHULLED

\*LESPEDEZA, SEDICEA  $\,^2\,$   $\,$  75 lbs.

LOVEGRASS, WEEPING 4 lbs.

\*LESPEDEZA, SEDICEA  $\,^{1}\,$  | 75 lbs.

LESPEDEZA, SEDICEA 1 75 lbs.

\*LESPEDEZA, SEDICEA 1 | 75 lbs.

BAHIA, PENSACOLA

BERMUDA, HULLED

CENTIPEDE, SOD

SEEDING RATES FOR TEMPORARY & PERMANENT COVER

TO MIX

IO lbs.

SEEDING RATES FOR TEMPORARY & PERMANENT COVER

RATE PER ACRE

SEEDED ADDED

ALONE TO MIX

RATE PER ACRE

SEEDED ADDED

4 lbs.

4 lbs.

40 lbs.

40 lbs.

50 lbs.

50 lbs.

60 lbs.

40 lbs.

40 lbs.

40 lbs.

40 lbs.

40 lbs.

TEMPORARY

COVER

\* LESPEDEZA, ANNUAL

LESPEDEZA, ANNUAL

\* RYEGRASS, ANNUAL

\* LESPEDEZA, ANNUAL

LOVEGRASS, WEEPING

LOVEGRASS, WEEPING

MILLET, BROWNTOP

MILLET, BROWNTOP

\* LOVEGRASS, WEEPING

TEMPORARY

COVER

\* MILLET, BROWNTOP

\* MILLET, PEARL \* RYEGRASS, ANNUAL

RYEGRASS, ANNUAL

RYEGRASS, ANNUAL

RYEGRASS, ANNUAL

RYEGRASS, ANNUAL

MILLET, PEARL

SUDANGRASS

\* BARLEY

\* OATS

\* WHEAT

OATS

AUGUST

OCTOBER

NOVEMBER

MILLET, BROWNTOP

MILLET, PEARL

SUDANGRASS

MILLET. PEARL

SUDANGRASS

\* MILLET, PEARL

\* RYEGRASS, ANNUAL

\* SUDANGRASS

\* LOVEGRASS, WEEPING

\* RYEGRASS, ANNUAL

\* WHEAT

MONTH

Table 2.	. Fertilizer Requirements for Permanent	Vegetation
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Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./ acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	1000	
	Maintenance	10-10-10	400	30
Cool grasses and legumes	First	6-12-12	1500	0-50
	Second	0-10-10	1000	
	Maintenance	0-10-10	400	
Warm season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	800	50-100
	Maintenance	10-10-10	400	30
Warm season grasses and legumes	First	6-12-12	1500	50
	Second	0-10-10	1000	
	Maintenance	0-10-10	400	

 Apply agricultural lime at a rate of 1-2 tons/ acre unless soil tests indicate otherwise.





Table 1. Mulching Application Requirements

Table 1. Malerling Application Requirements					
Material	Rate	Depth			
Straw or hay	1	2" to 4"			
Wood waste, chips, sawdust, bark	1	2" to 3"			
Polyethylene film	Secure with soil, anchors, weights	1			
Geotextiles, jute matting, netting, etc.	See manufac- turer's recom- mentations	-			

Material	Rate	Depth
Straw or hay	1	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Polyethylene film	Secure with soil, anchors, weights	-
Geotextiles, jute matting, netting, etc.	See manufac- turer's recom- mentations	-



### DUST CONTROL

DEFINITION: CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON LAND-DISTURBING ACTIVITIES. PURPOSE: PREVENT THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND PREVENT THE MOVEMENT OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL TO HEALTH.

TEMPORARY METHODS	PERMANENT METHODS
- MULCHES	- PERMANENT VEGETATION
- TEMPORARY VEGETATIVE COVER	- TOPSOILING
- SPRAY ON ADHESIVES	- STONE COVER
- TILLAGE	STONE COVER
- IRRIGATION	
- BARRIERS	
- CALCIUM CHLORIDE	

INSTALLATION: APPLY ACCORDING TO APPROVED PLAN, IF SHOWN. MULCH DISTURBED AREAS AND TACKIFY WITH REDSINS SUCH AS ASPHALT, CURASOL OR TERRATACK ACCORDING TO MANUFACTURES RECOMMENDATIONS. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION. COVER SURFACES WITH CRUSHED STONE OR GRAVEL. APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES MOIST. APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS AS DESCRIBED IN TABLE I.

TABLE I. SPRAY-ON ADHESIVE APPLICATION REQUIREMENTS

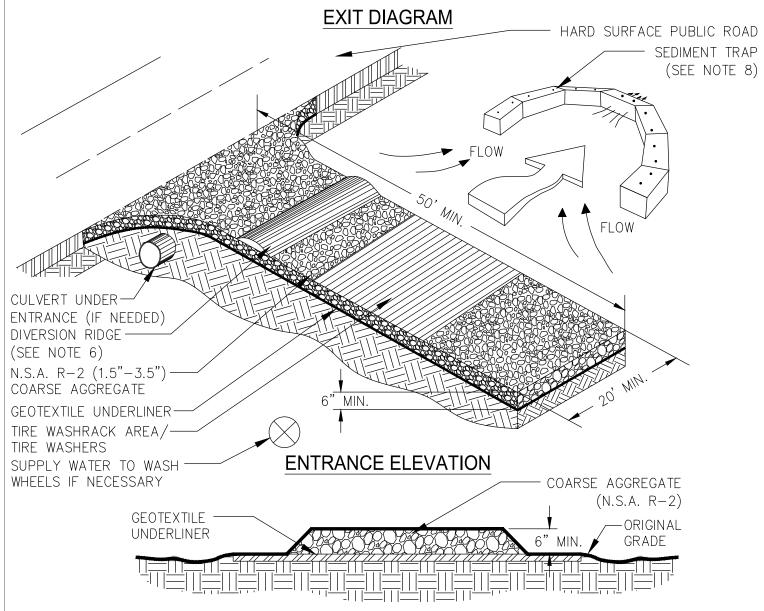
ANIONIC ASPHALT EMULSION  LATEX EMULSION  I2.5:I *  FINE SPRAY  FINE SPRAY  RESIN-IN- WATER FMULSION  FINE SPRAY  300	ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL / ACRE)
RESIN-IN- WATER  4:1 *  SPRAY  235  FINE SPRAY  300	ASPHALT	7:  *		1,200
WATER 4:1 * FINE SPRAY 300		12.5:1 *		235
2525.5.1		4:  *	=	300

PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING. SUPPLEMENT SURFACE COVERING AS NEEDED.



**DUST CONTROL** NOT TO SCALE

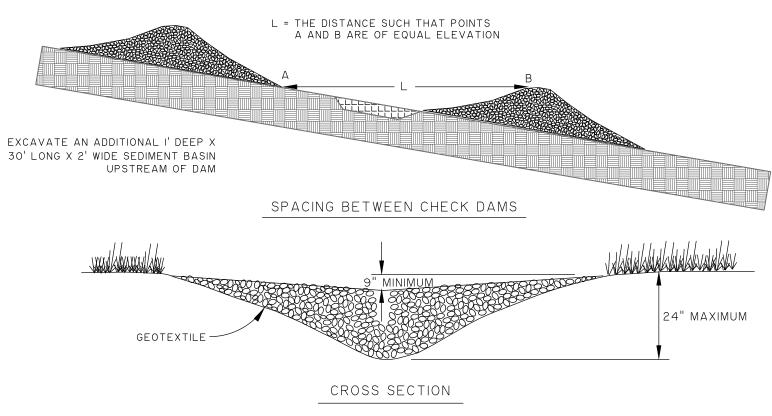


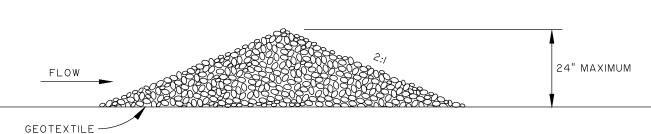


- . AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE
- 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE). 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6". 5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.

DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND

- 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.. 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES. 8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT
- DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE). . WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL <u>SUITABLE</u> FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
- 10.MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.





NOTE:

Ds1

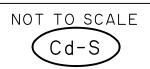
I. STONE TO BE GRADED SIZE 2-10 INCH STONE MECHANICAL OR HAND PLACEMENT SHALL BE REQUIRED TO INSURE COMPLETE COVERAGE OF ENTIRE WIDTH OF DITCH OR SWALE AND THAT CENTER OF DAM IS LOWER THAN EDGES.

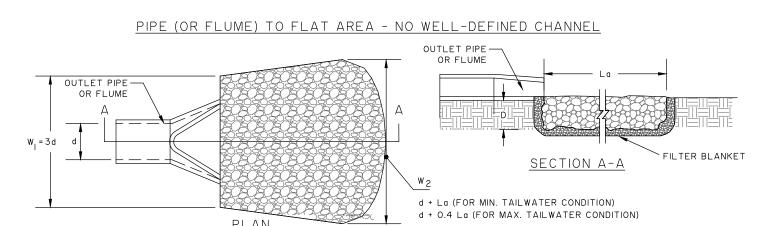
2. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES A DEPTH OF ONE-HALF THE ORIGINAL DAM HEIGHT OR BEFORE. CHECK DAMS MUST BE REMOVED AT THE COMPLETION OF THEIR USEFUL LIFE. AFTER REMOVAL, THE AREA BENEATH THE DAM SHOULD BE SEEDED AND MULCHED IMMEDIATELY.

LONGITUDINAL SECTION

3. THIS PRACTICE IS APPLICABLE FOR USE IN SMALL OPEN CHANNELS AND IS NOT TO BE USED IN A LIVE CHANNEL.

### CHECK DAM-STONE





NOTES: I. La = LENGTH THE RIP-RAP APRON

2. d = OUTLET PIPE DIAMETER

3. d<sub>50</sub> = AVERAGE RIP RAP STONE DIAMETER

5. d<sub>MAX</sub> = MAXIMUM RIP RAP STONE DIAMETER = 1.5 TIMES d<sub>50</sub>

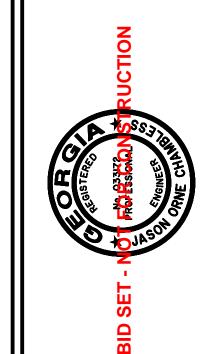
6. D = RIP RAP APRON DEPTH = 1.5 TIMES  $d_{MAX}$  BUT NOT LESS THAN 6"

7. W<sub>I</sub> = UPSTREAM RIP RAP APRON WIDTH = 3d 8. W2 = DOWNSTREAM RIP RAP APRON WIDTH, SEE DETAIL

7. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.

8. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP-RAP AND SOIL FOUNDATION. 9. INSPECT RIP RAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

STORM DRAIN OUTLET PROTECTION FOR PIPE OR CONCRETE FLUME



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G

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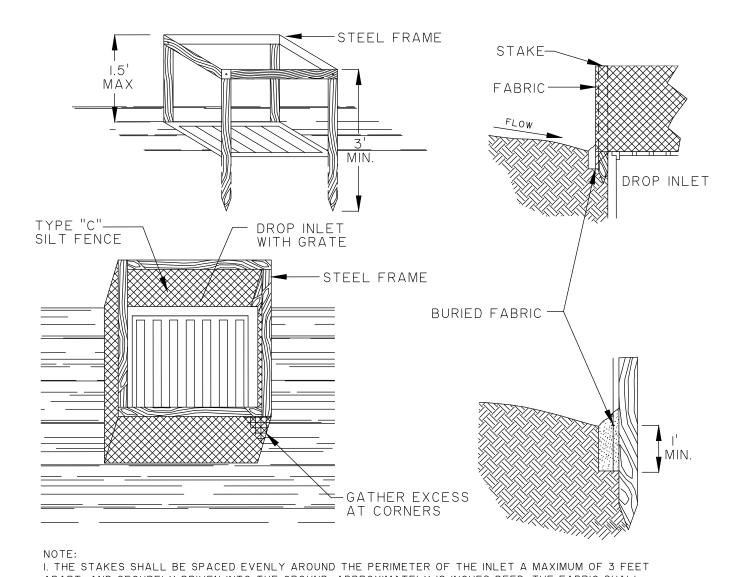
03/05/2020 DRAWN DESIGNED: SRN REVIEWED: JOC APPROVED: TW

ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED 1. UNSCARIFIED

\* INDICATES MARGINAL (BUT PERMISSIBLE) PLANTING DATE

2. SCARIFIED

3. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THRU OCTOBER



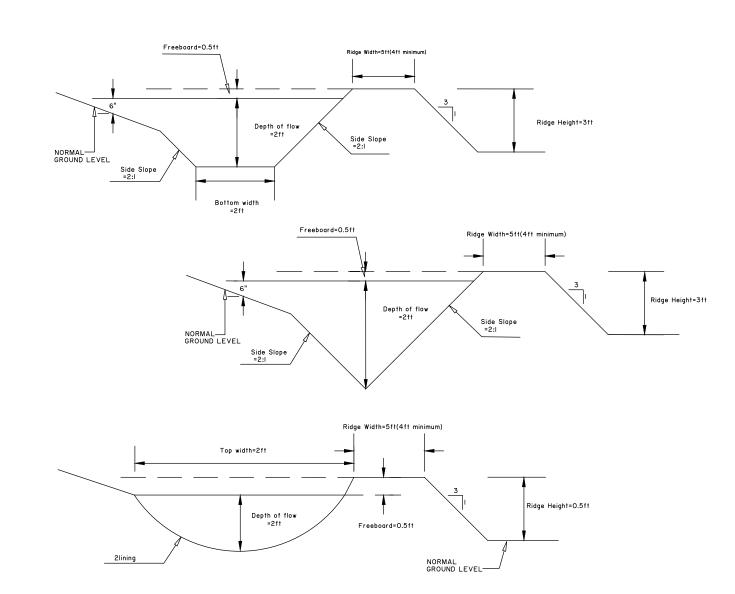
NOTE:
I. THE STAKES SHALL BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND SECURELY DRIVEN INTO THE GROUND, APPROXIMATELY I8 INCHES DEEP. THE FABRIC SHALL BE ENTRENCHED I2 INCHES AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL. FABRIC AND WIRE SHALL BE SECURELY FASTENED TO THE POSTS, AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF I8 INCHES OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS BARRIER AROUND THE

2. THE TRAP SHALL BE INSPECTED DAILY AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP.

3. SEDIMENT SHALL NOT BE WASHED INTO THE INLET. IT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT AGAIN ENTER THE INLET.
WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, ALL MATERIALS AND ANY SEDIMENT SHALL BE REMOVED AND EITHER SALVAGED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHALL BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREAS AROUND THE INLET.

# INLET SEDIMENT TRAP FILTER FABRIC W/ SUPPORTING FRAME

NOT TO SCAL



DIVERSIONS ARE APPLICABLE WHEN:
I. RUNOFF FROM HIGHER AREAS IS OR HAS POTENTIAL FOR DAMAGING PROPERTY, CAUSING EROSION,
CONTRIBUTING TO POLLUTION, FLOODING, INTERFERING WITH OR PREVENTING THE ESTABLISHMENT OF
VEGETATION ON LOWER AREAS.

2. SURFACE AND/OR SHALLOW SUBSURFACE FLOW IS DAMAGING SLOPING UPLAND.
3. THE LENGTH OF SLOPE NEEDS TO BE REDUCED SO THAT SOIL LOSS WILL BE REDUCED TO A MINIMUM.
THIS STANDARD APPLIES TO TEMPORARY AND PERMANENT DIVERSIONS IN DEVELOPMENTS INVOLVING
LAND-DISTURBING ACTIVITIES.

4. THE RIDGE SHALL BE COMPACTED AND DESIGNED TO HAVE STABLE SIDE SLOPES, WHICH SHALL NOT BE STEEPER THAN 2:1. THE RIDGE SHALL HAVE A MINIMUM WIDTH OF FOUR FEET AT THE DESIGN WATER ELEVATION AFTER SETTLEMENT. ITS DESIGN SHALL ALLOW TEN PERCENT FOR SETTLEMENT.

5. LAND SLOPE MUST BE TAKEN INTO CONSIDERATION WHEN CHOOSING CHANNEL DIMENSIONS.
ON THE STEEPER SLOPES, NARROW AND DEEP CHANNELS MAY BE REQUIRED. ON THE MORE
GENTLE SLOPES, BROAD, SHALLOW CHANNELS ARE USUALLY APPLICABLE. THE WIDE, SHALLOW
SECTION WILL BE EASIER TO MAINTAIN. SINCE SEDIMENT DEPOSITION IS OFTEN A PROBLEM
IN DIVERSIONS, THE DESIGNED FLOW VELOCITY SHOULD BE KEPT AS HIGH AS THE

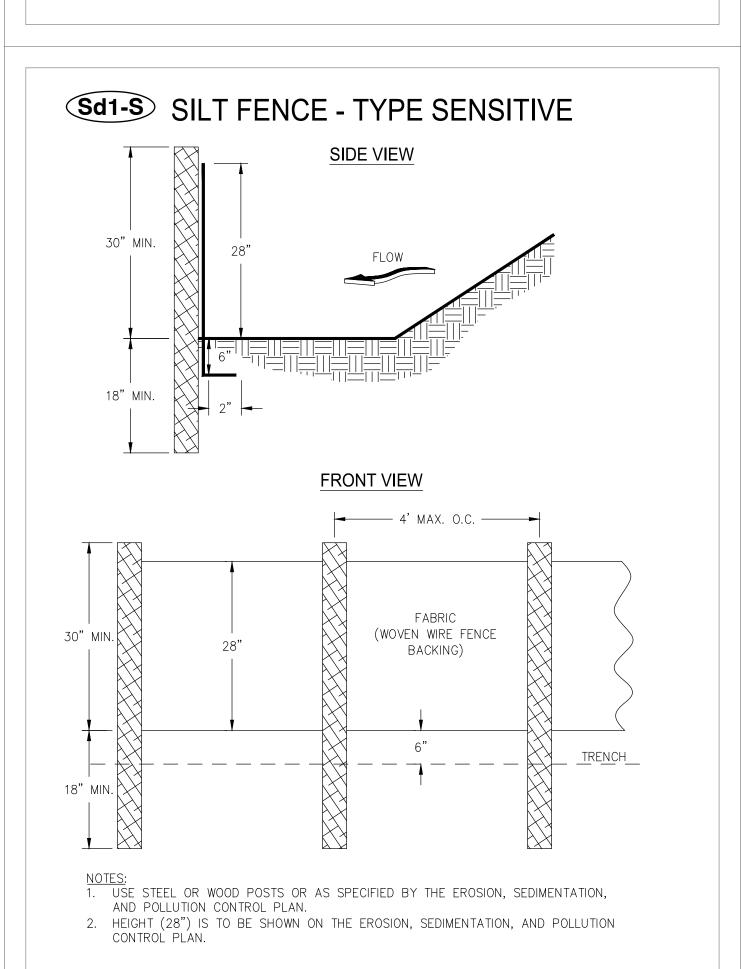
CHANNEL LINING WILL PERMIT.

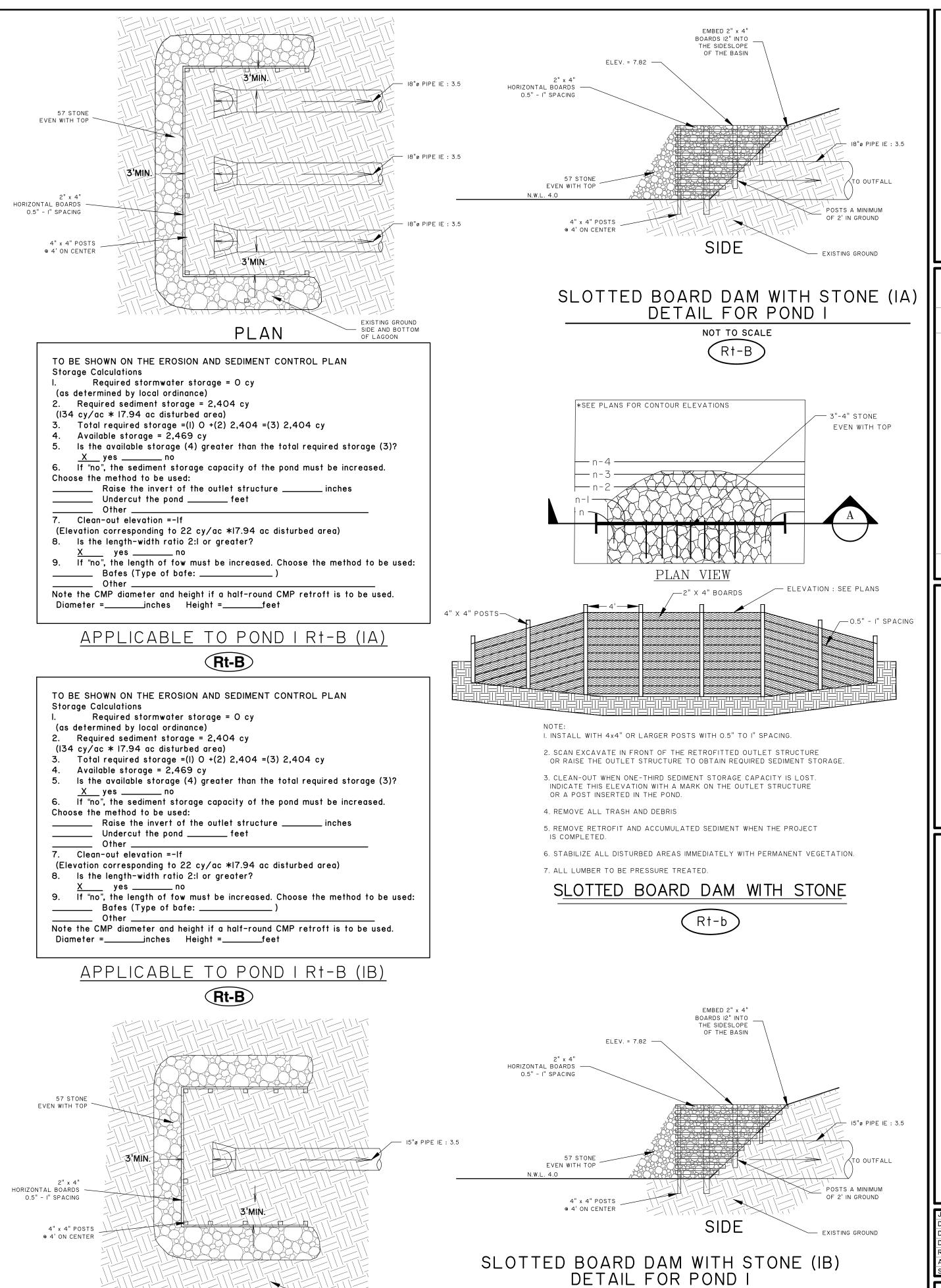
6. EACH DIVERSION MUST HAVE AN ADEQUATE OUTLET. THE OUTLET MAY BE A CONSTRUCTED OR NATURAL WATERWAY, A STABILIZED VEGETATED AREA OR A STABILIZED OPEN CHANNEL.
IN ALL CASES, THE OUTLET MUST DISCHARGE IN SUCH A MANNER AS TO NOT CAUSE AN EROSION PROBLEM. PROTECTED OUTLETS SHALL BE CONSTRUCTED AND STABILIZED PRIOR TO CONSTRUCTION OF THE DIVERSION.

DIVERSION

NOT TO SCALE

# Sd1-NS SILT FENCE - TYPE NON-SENSITIVE SIDE VIEW FRONT VIEW FABRIC NOTES 1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN. 2. HEGHT (28') IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.





PLAN

SIDE AND BOTTOM
OF LAGOON

NOT TO SCALE

Rt-B

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LACTION

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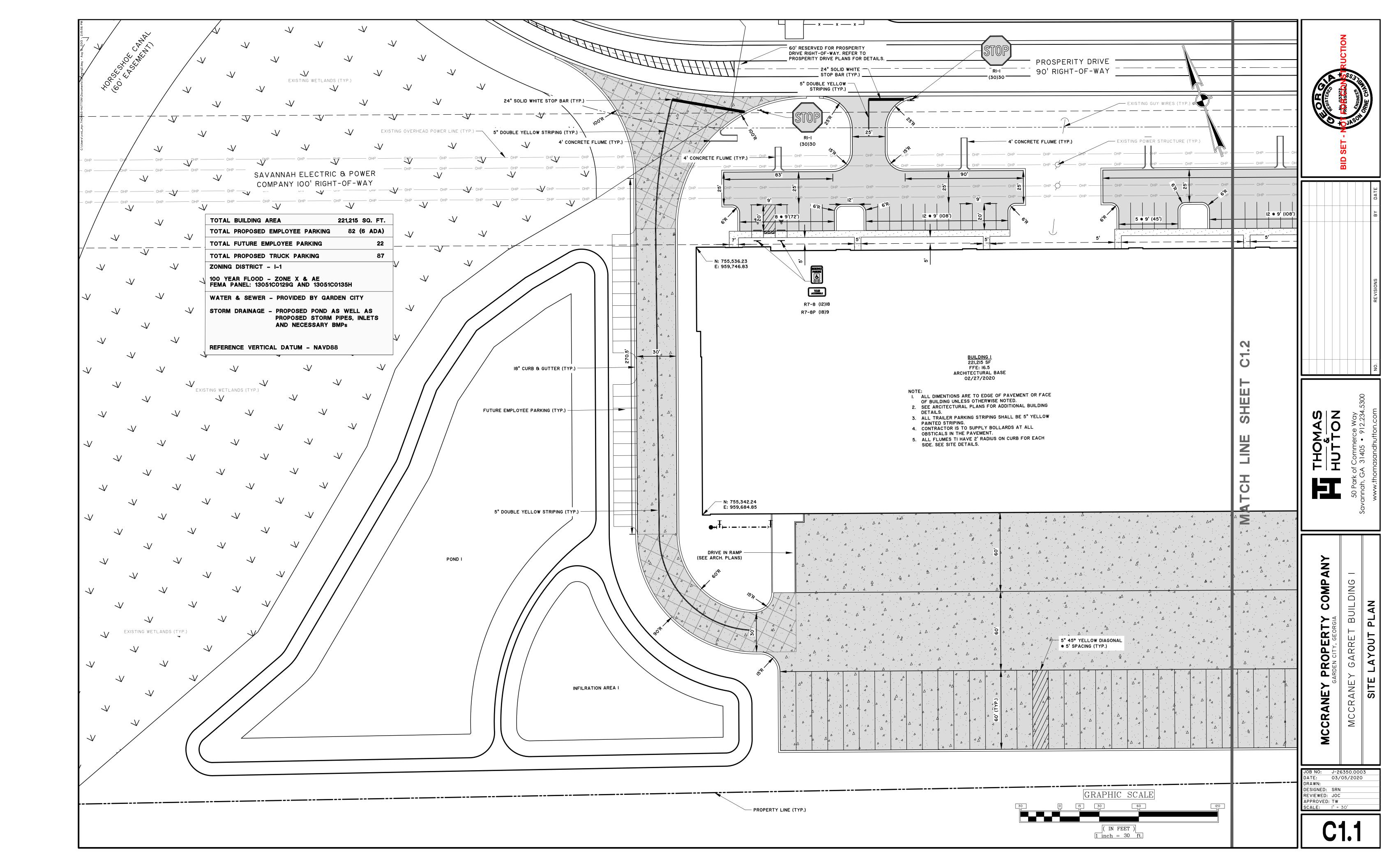
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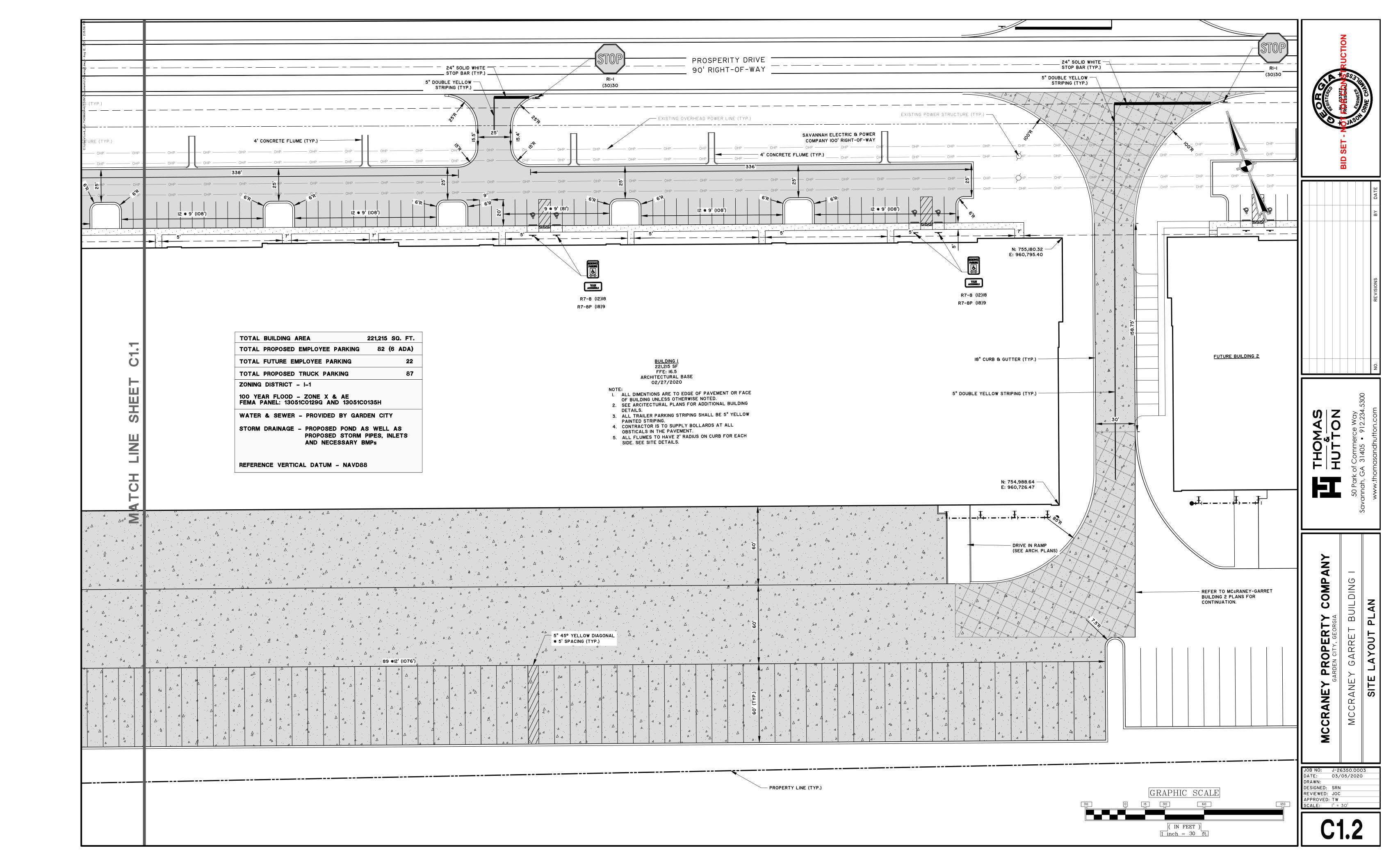
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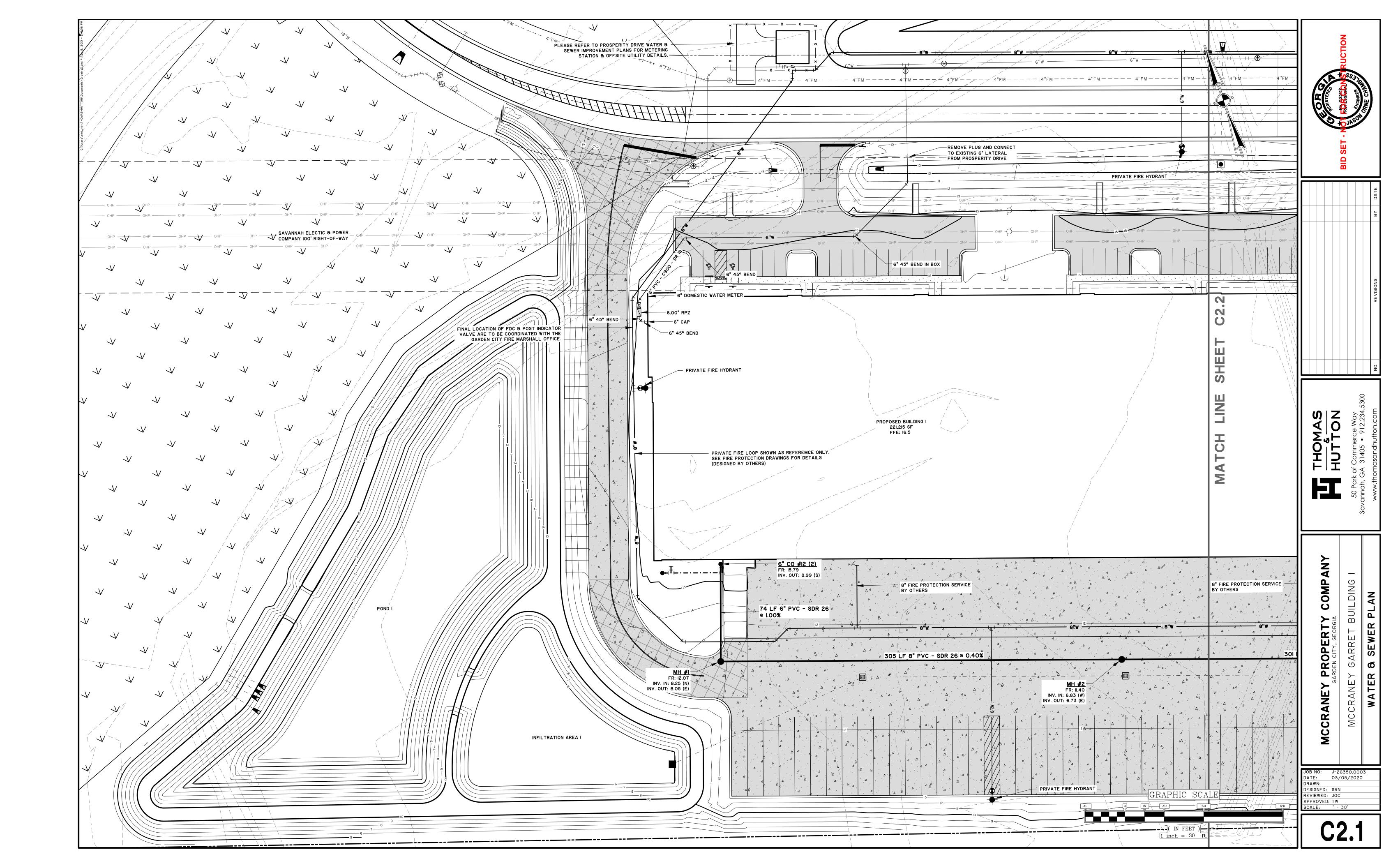
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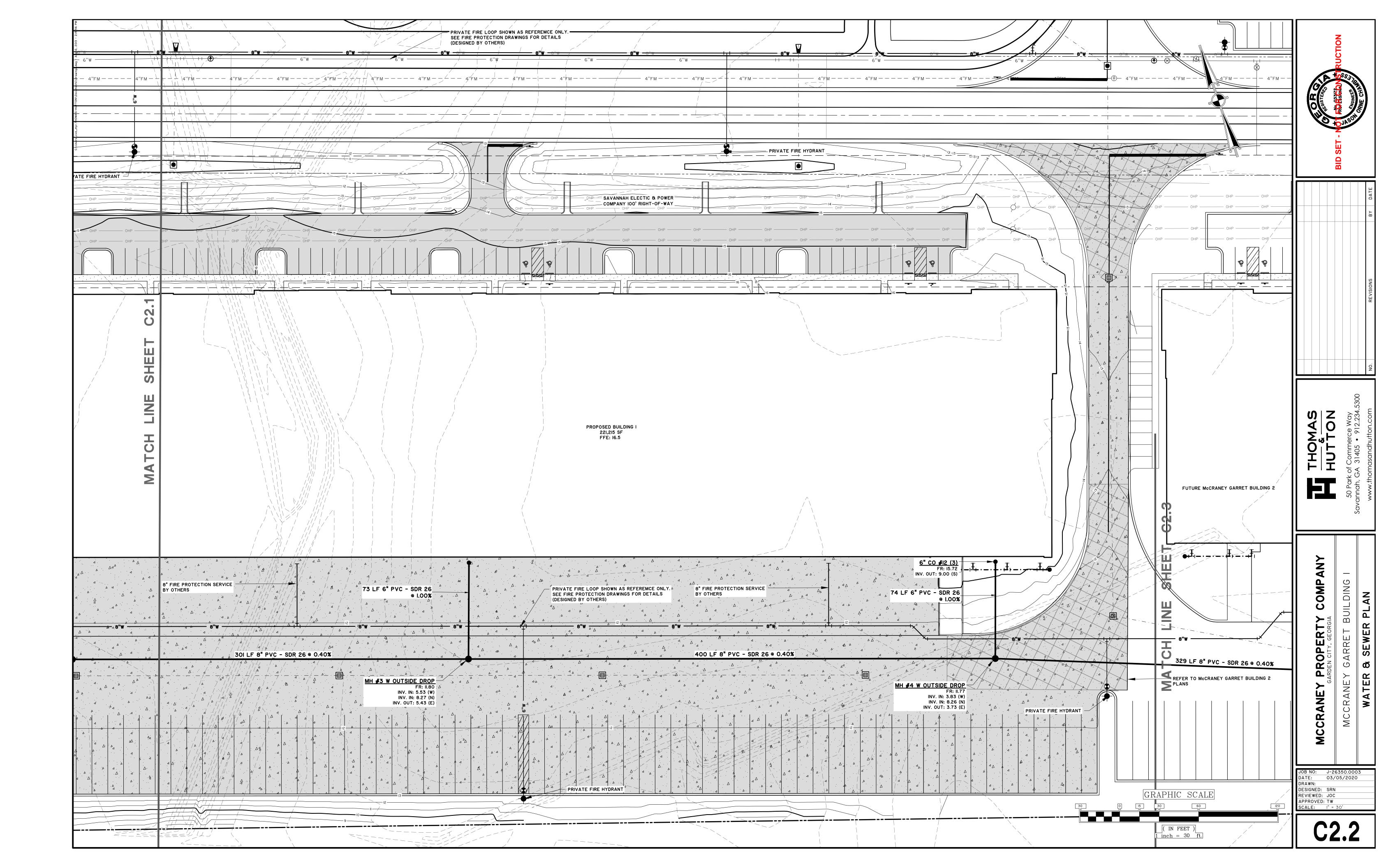
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DATE: 03/05/2020
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DESIGNED: SRN
REVIEWED: JOC
APPROVED: TW

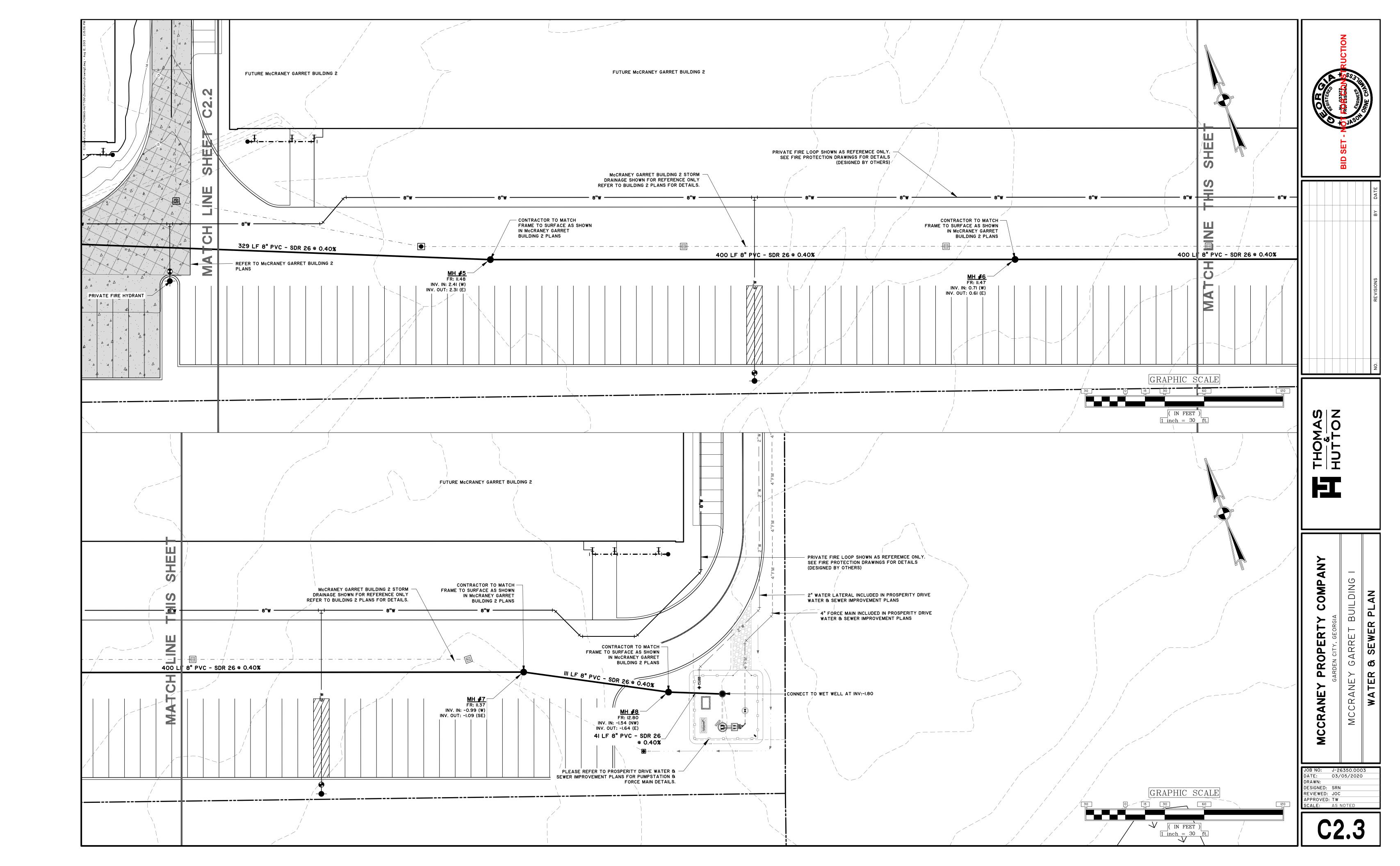
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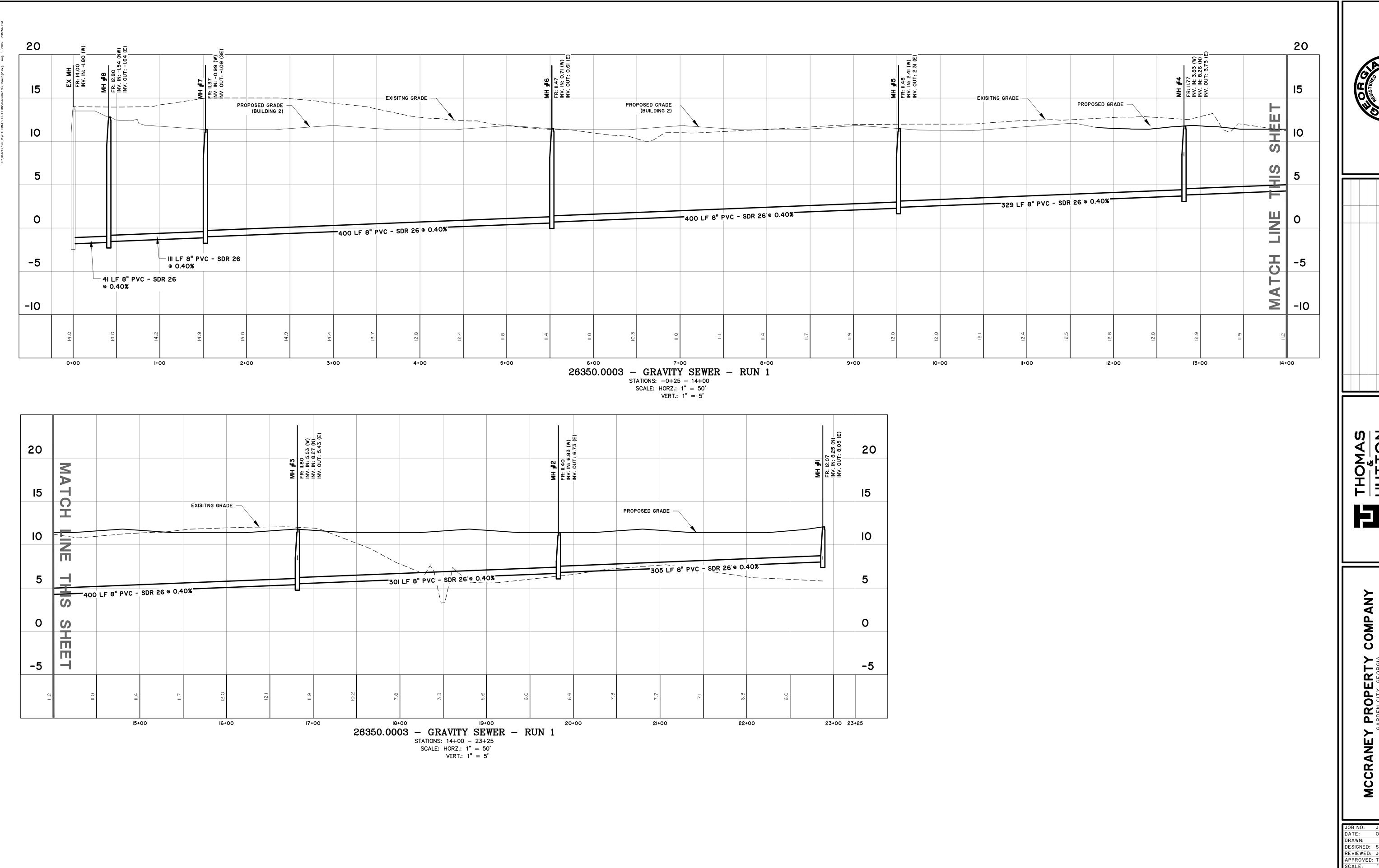










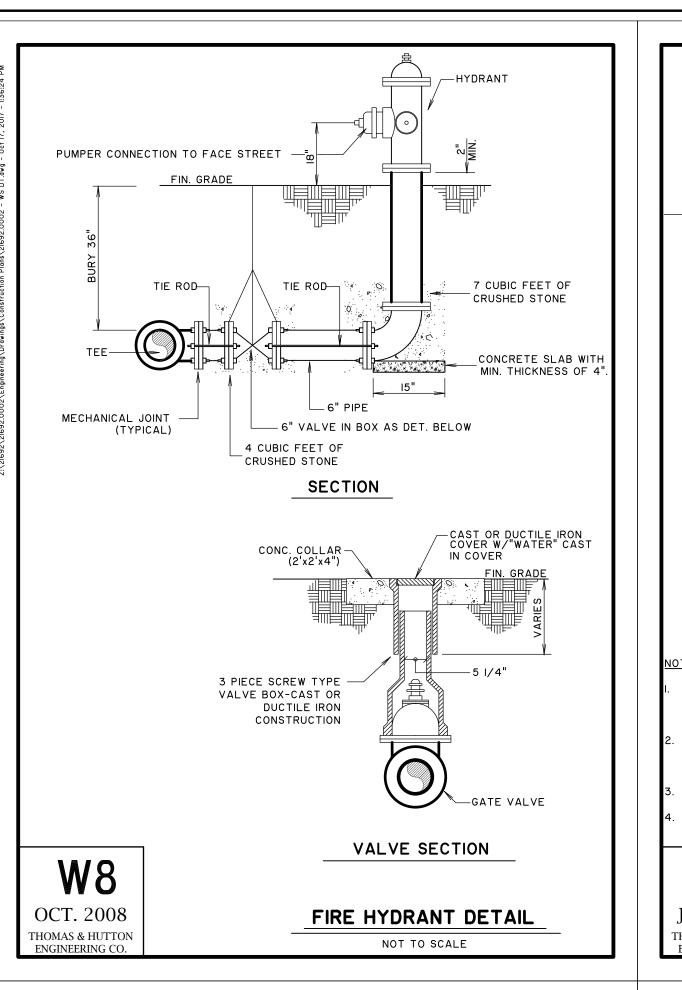


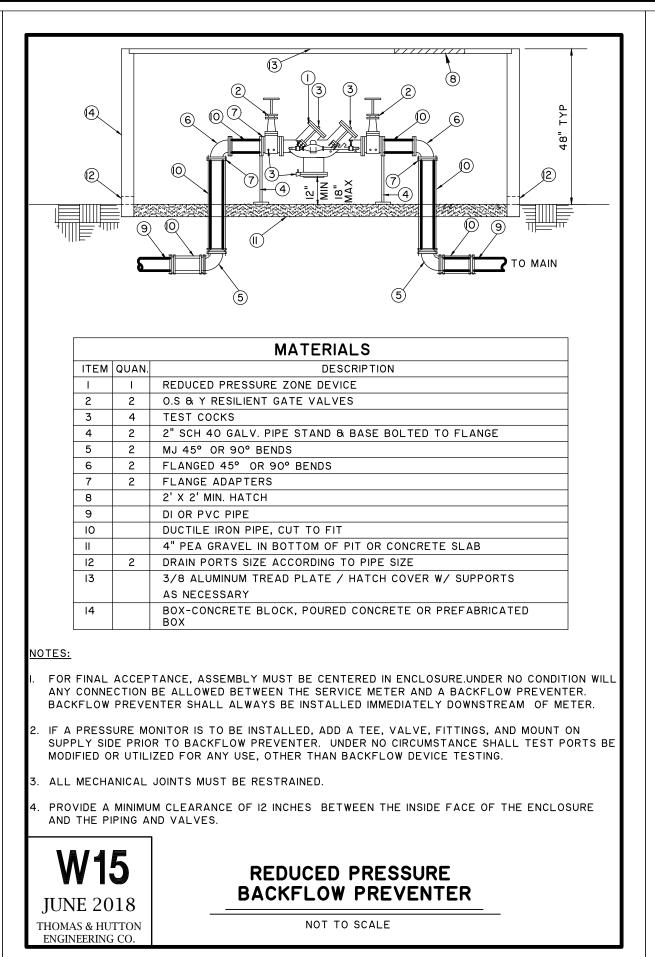
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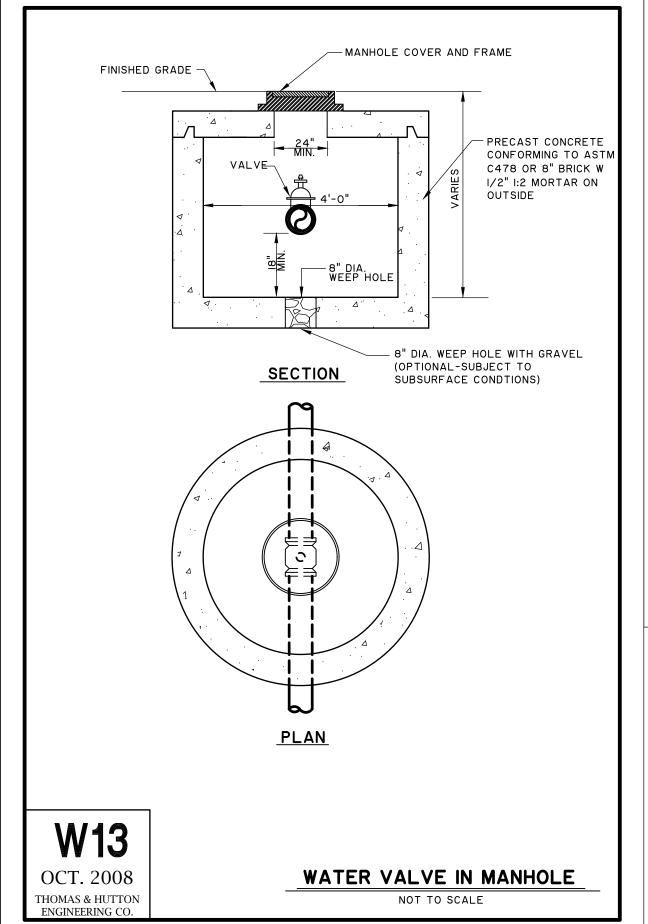
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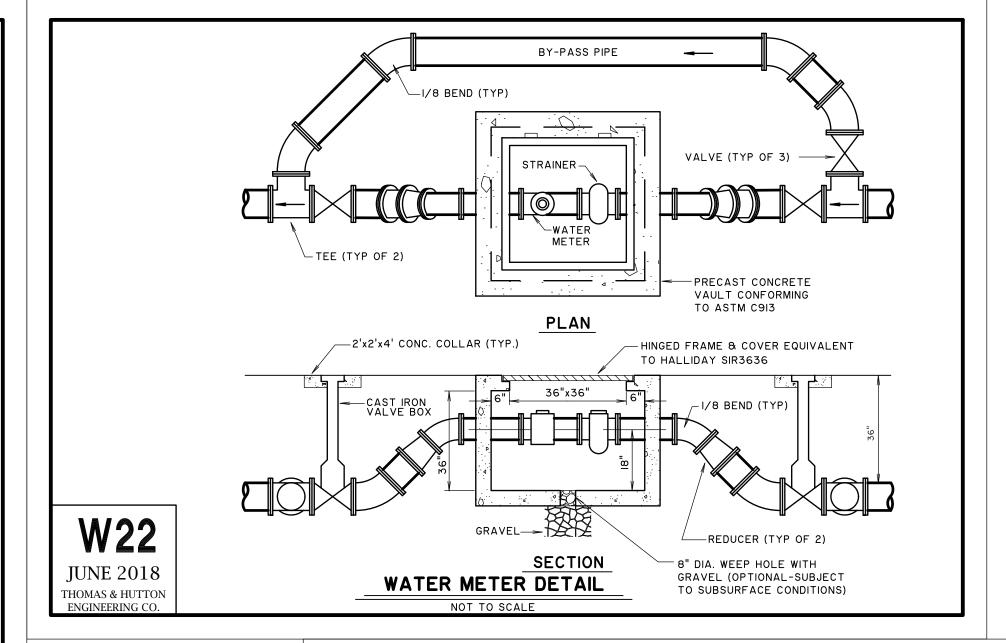
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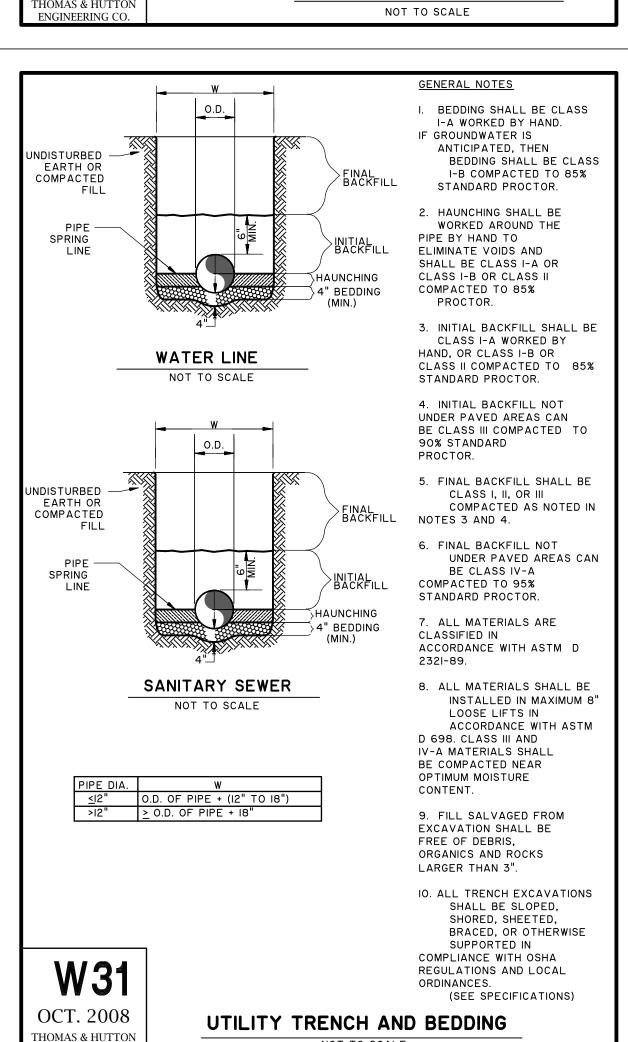
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REVIEWED: JOC
APPROVED: TW







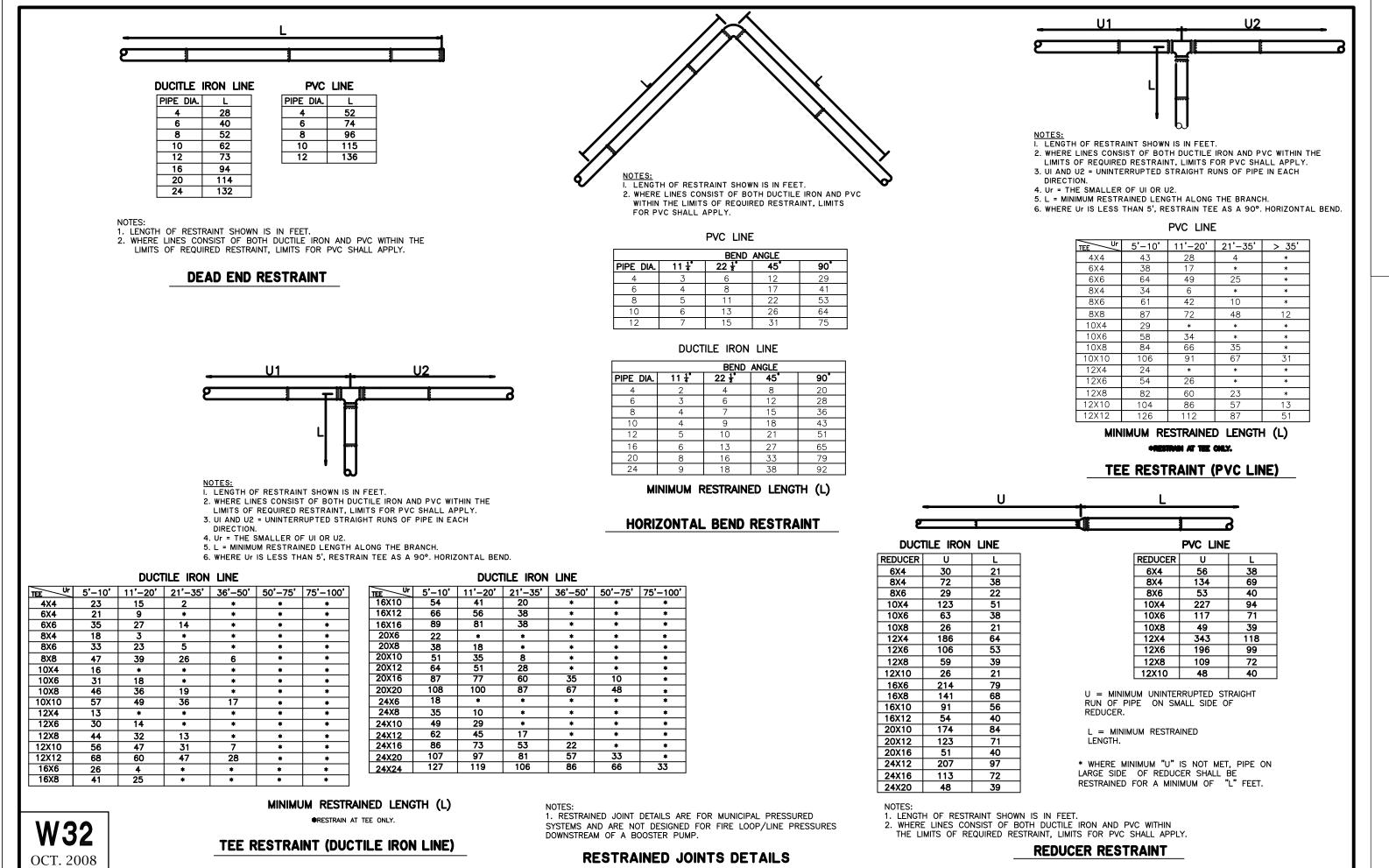




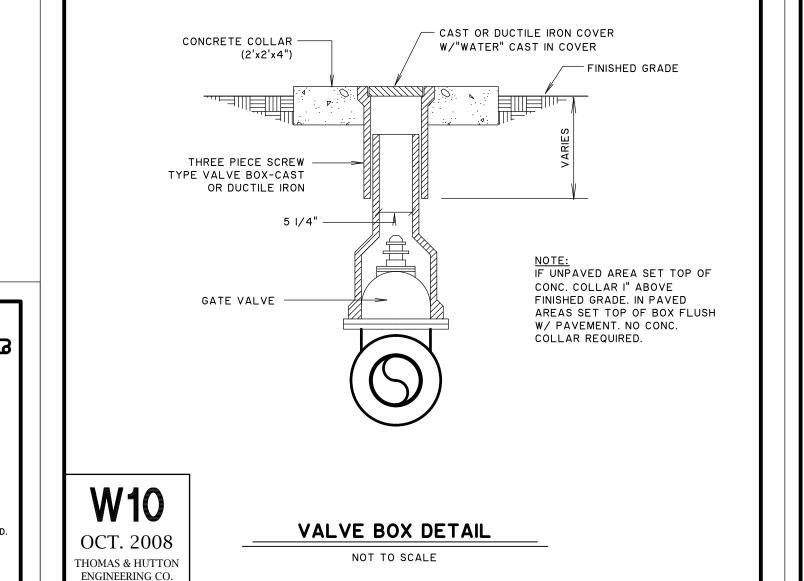
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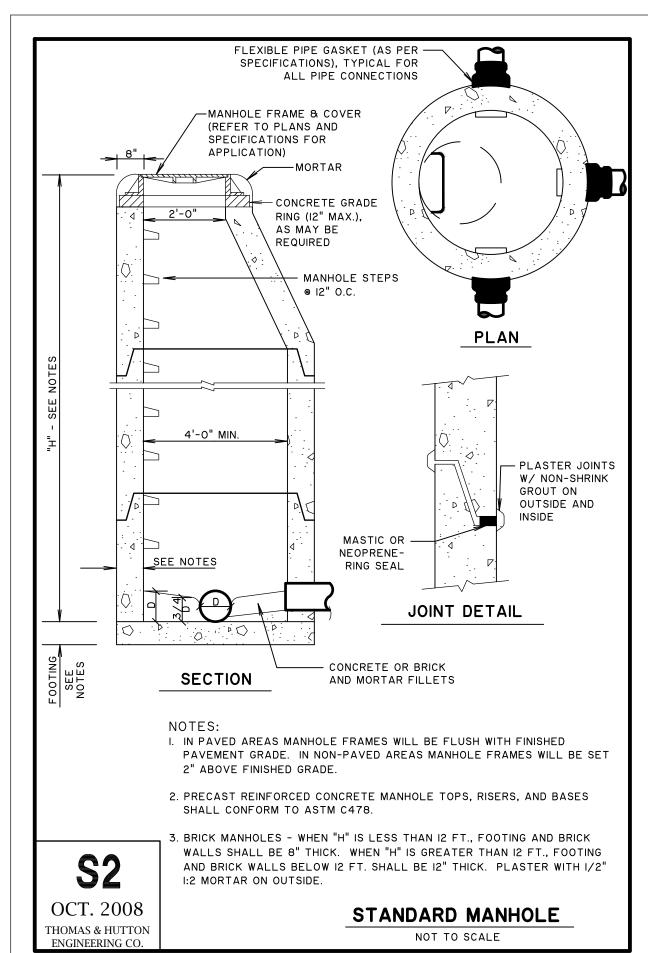
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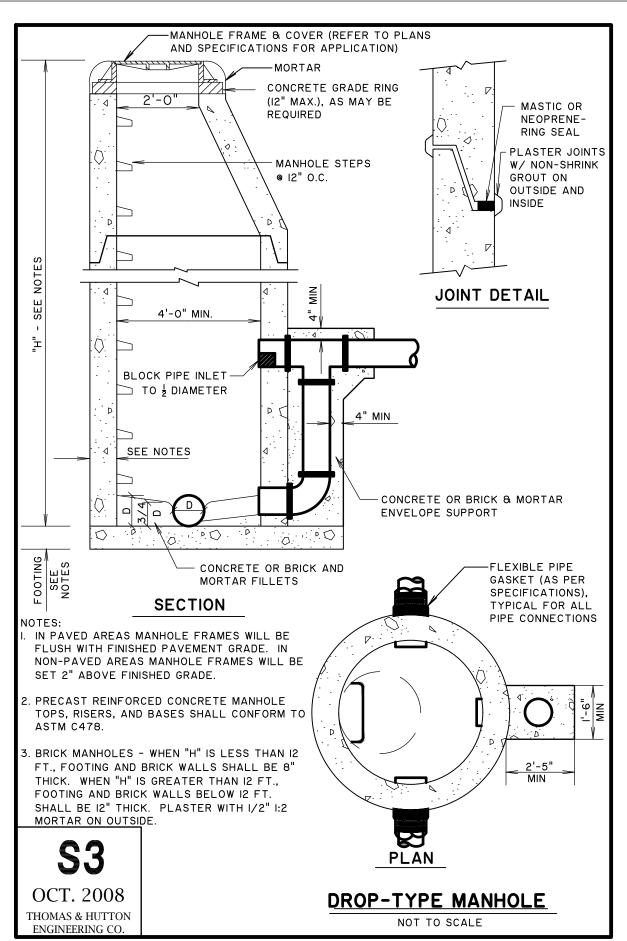
WATER DETAILS

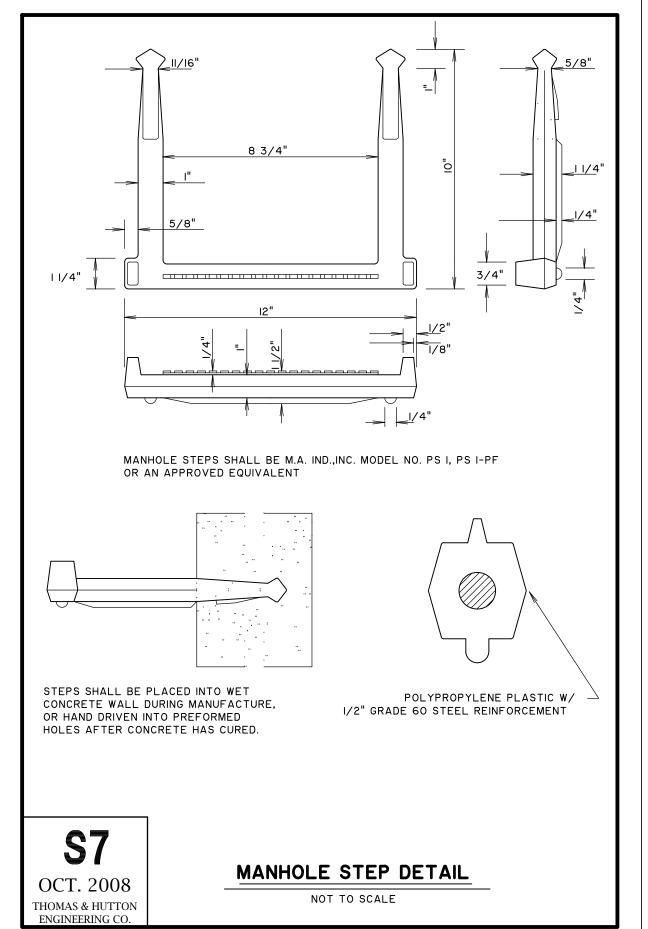
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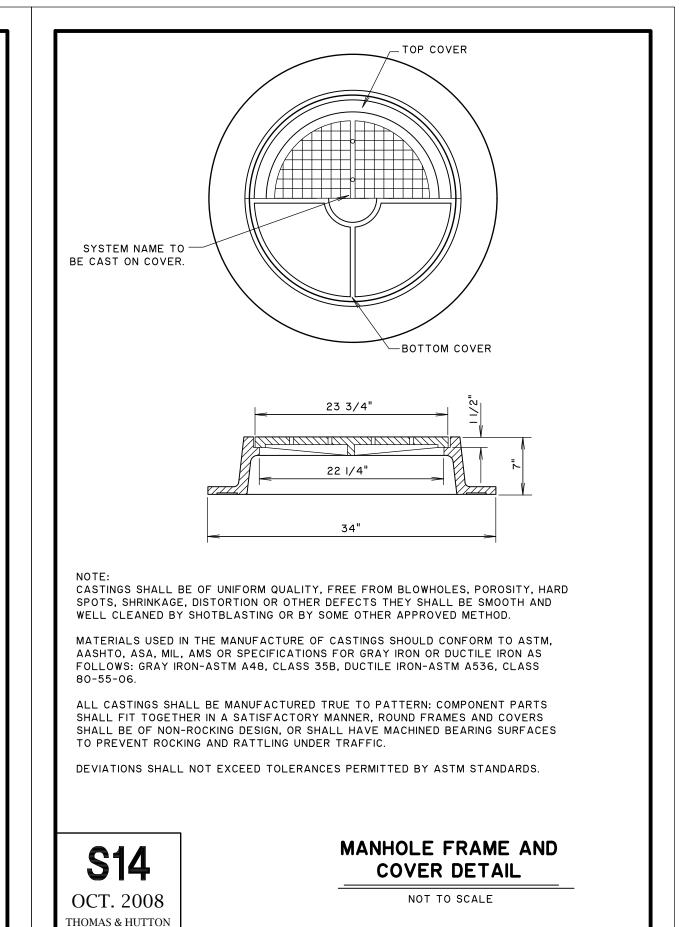
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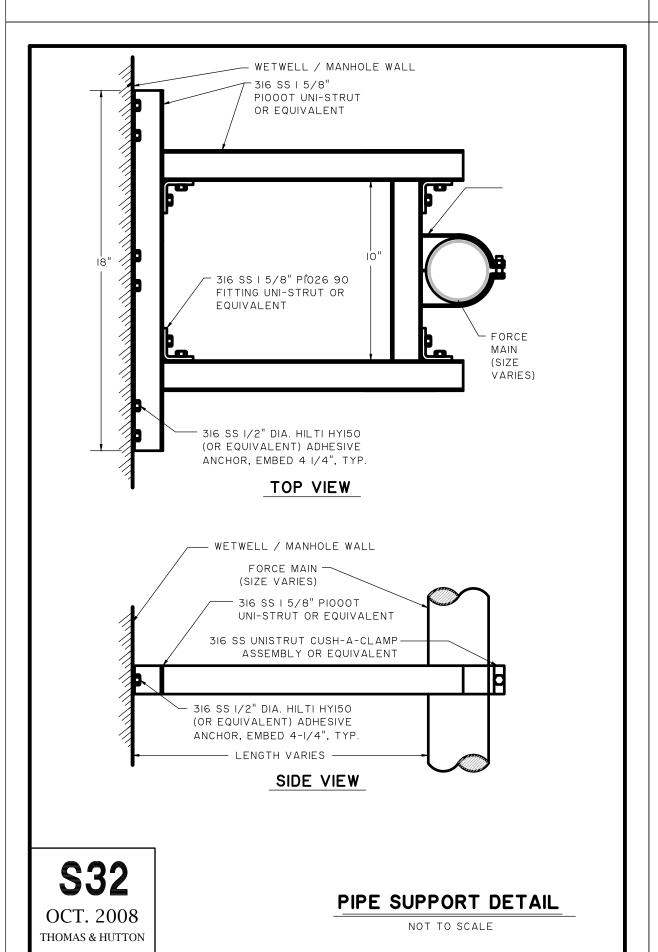


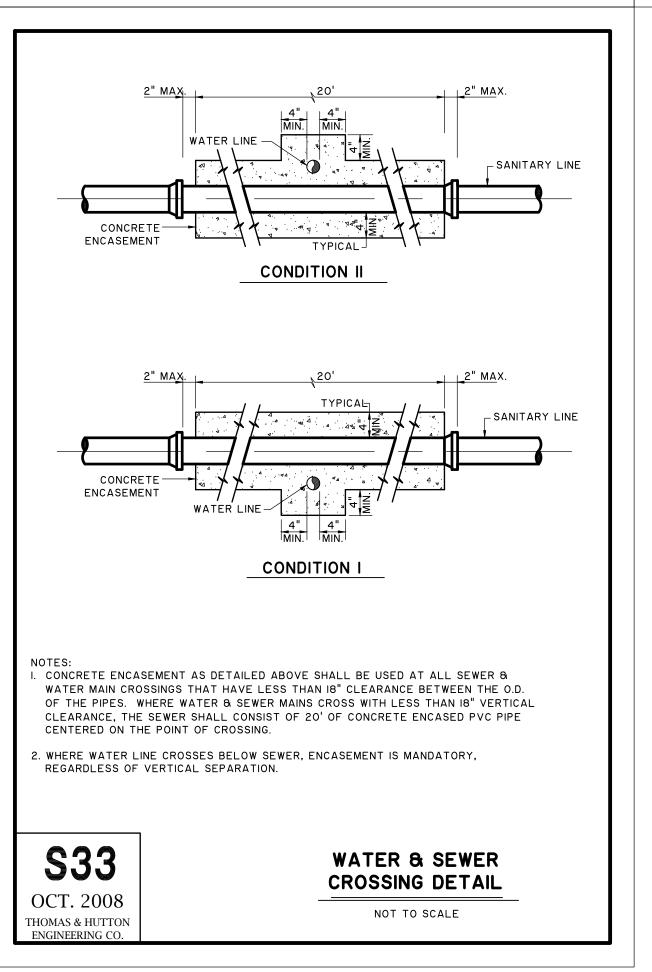


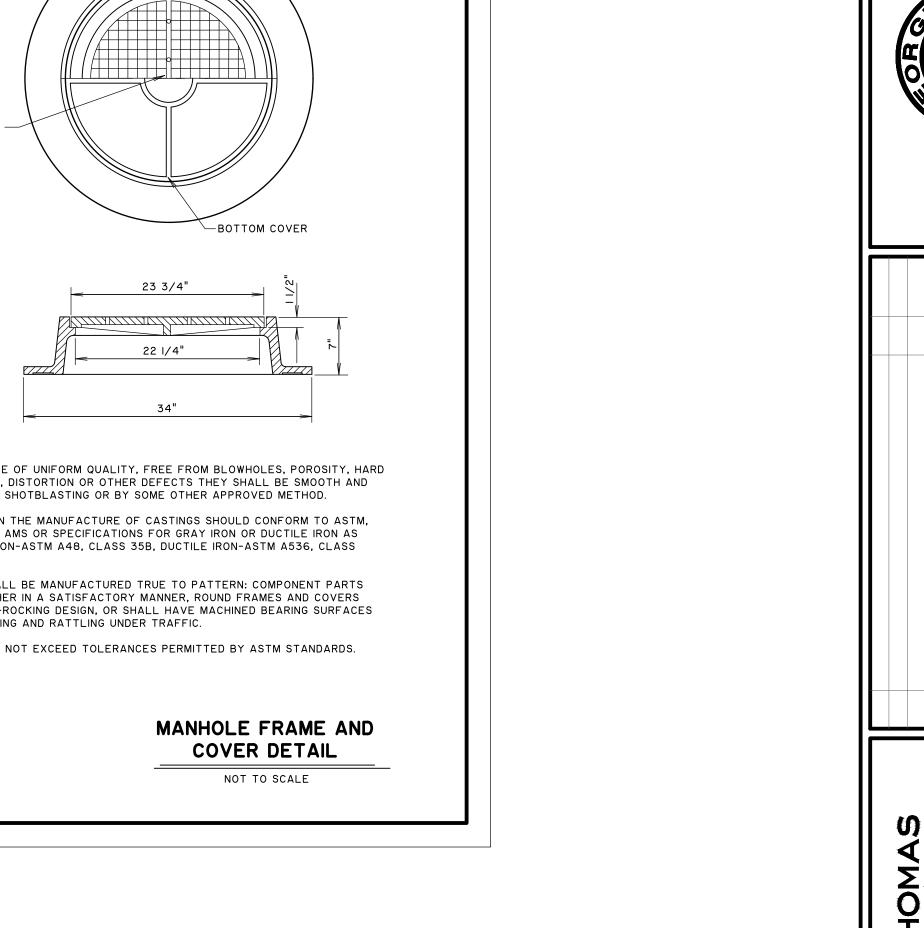




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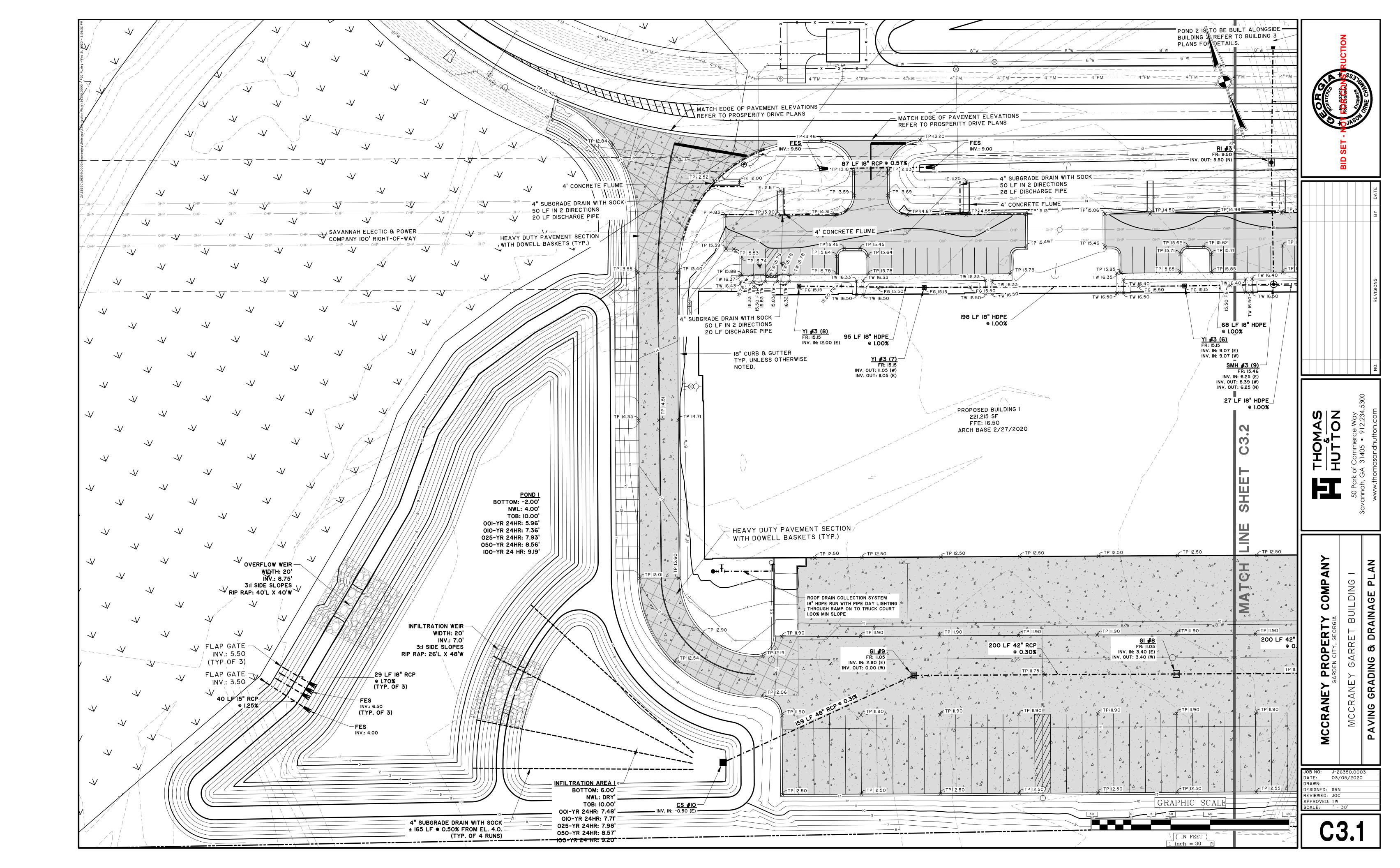
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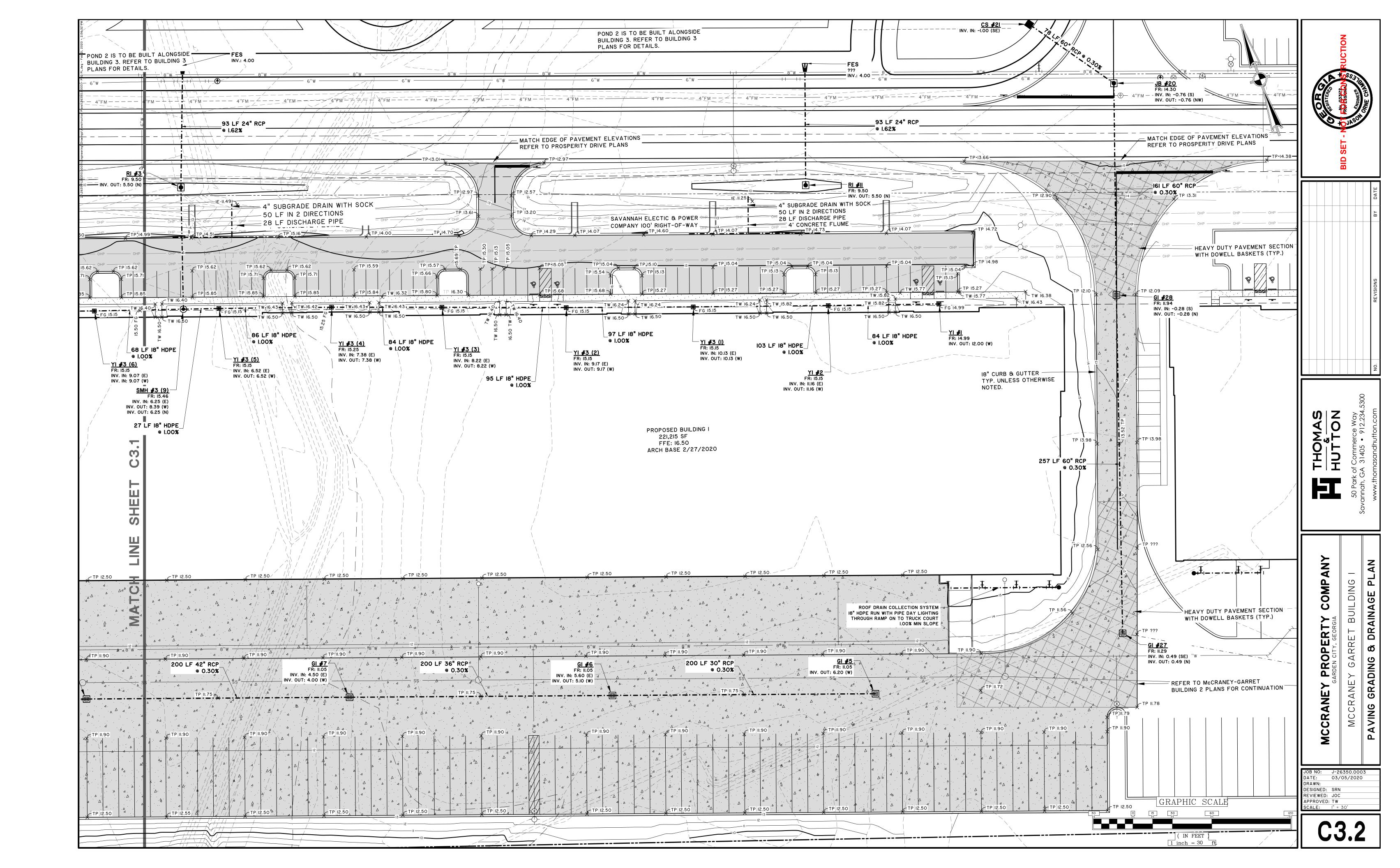
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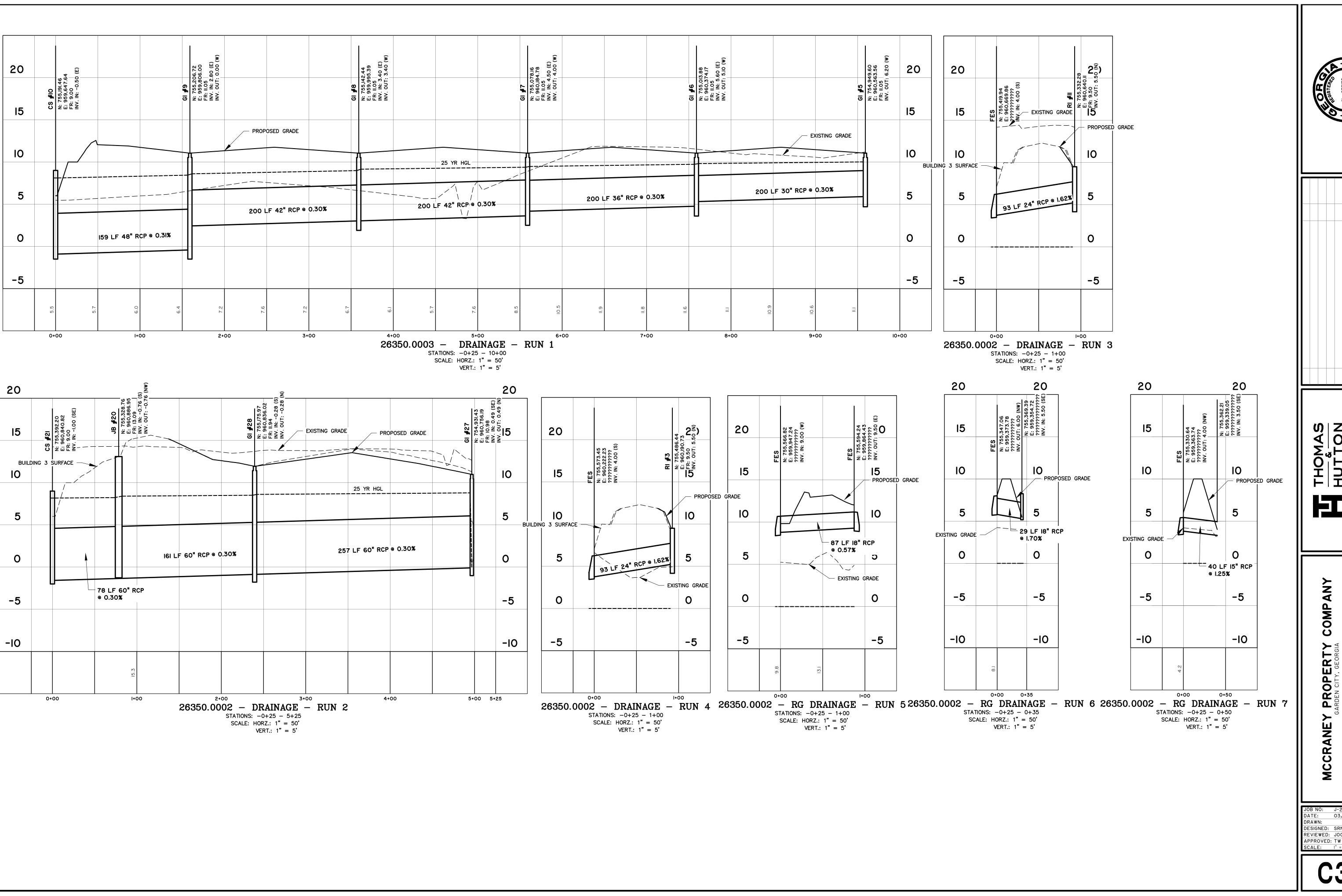
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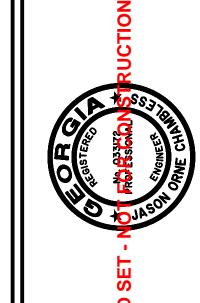
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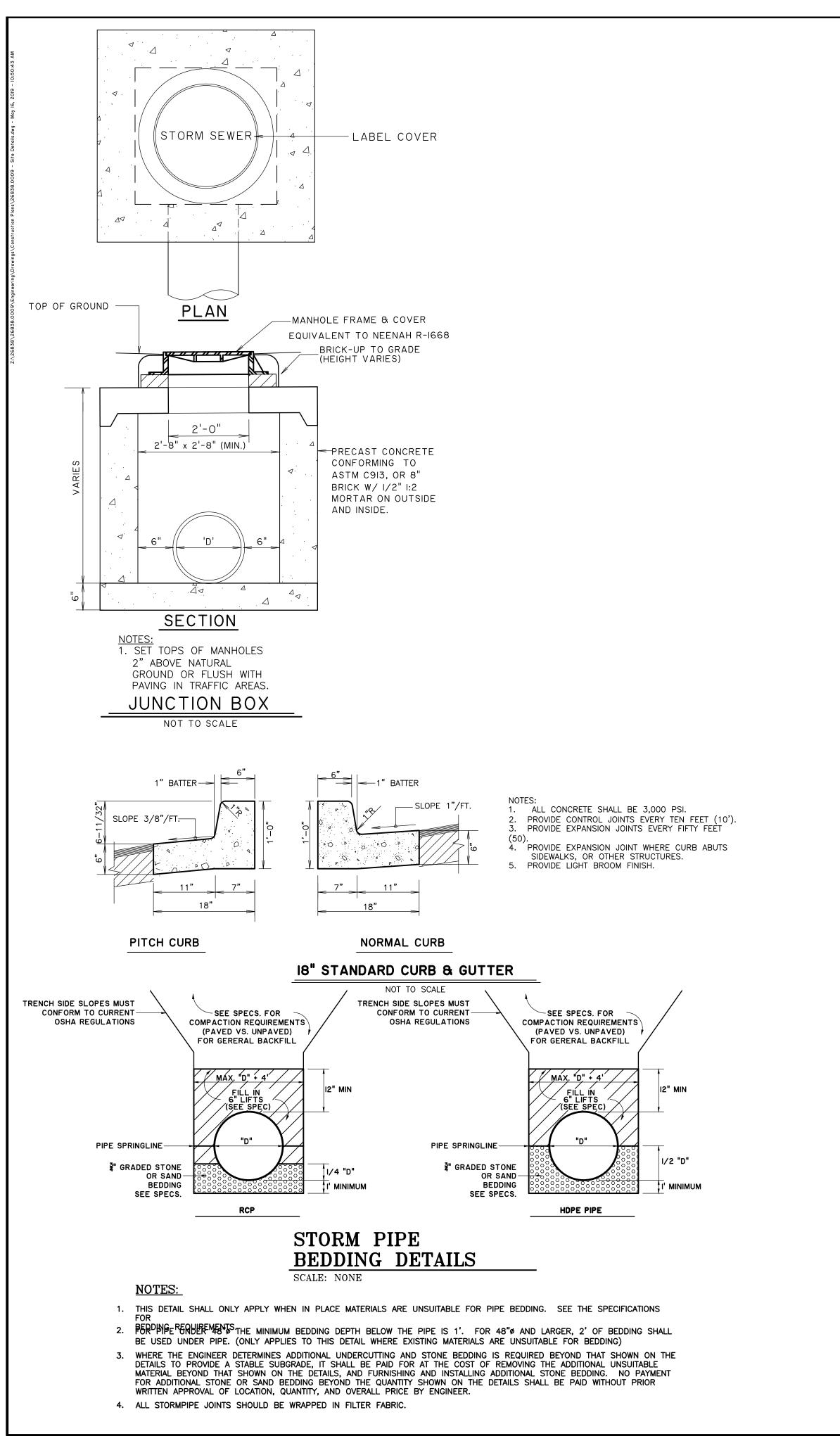
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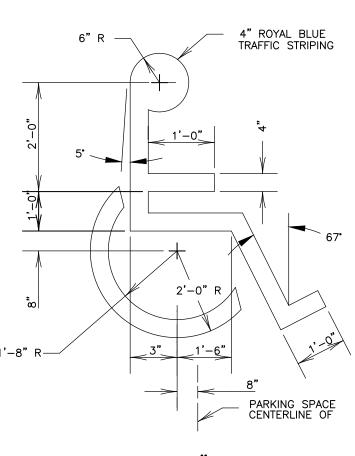
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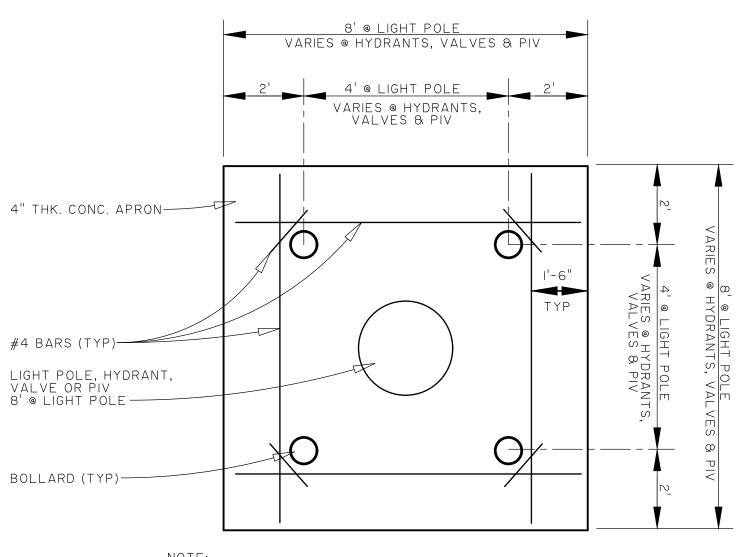
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# PAVEMENT "RESERVED PARKING" SYMBOL

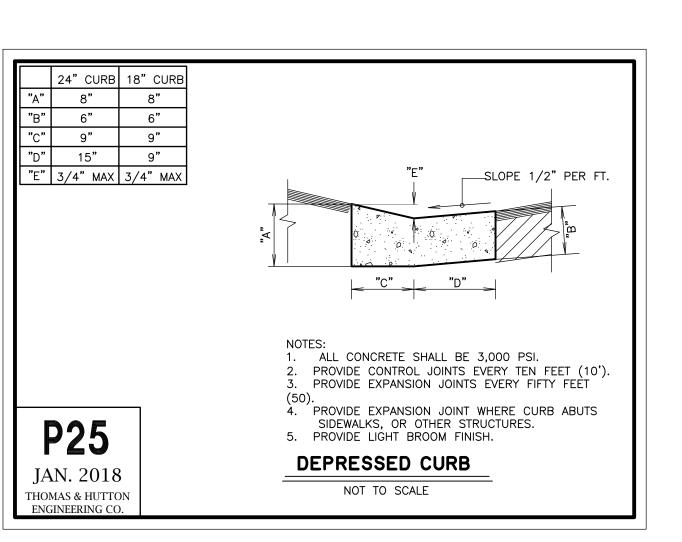
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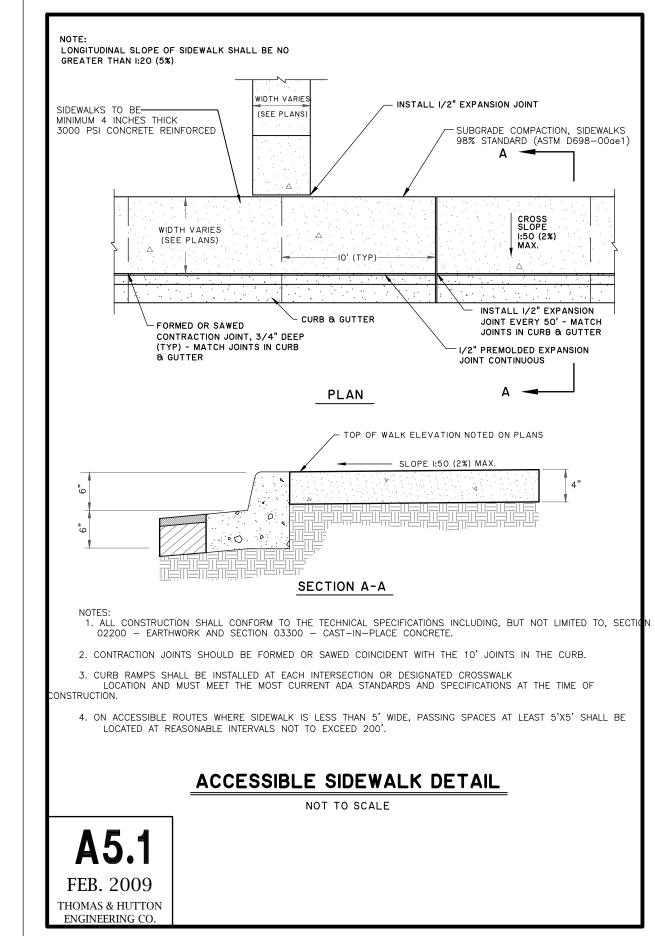


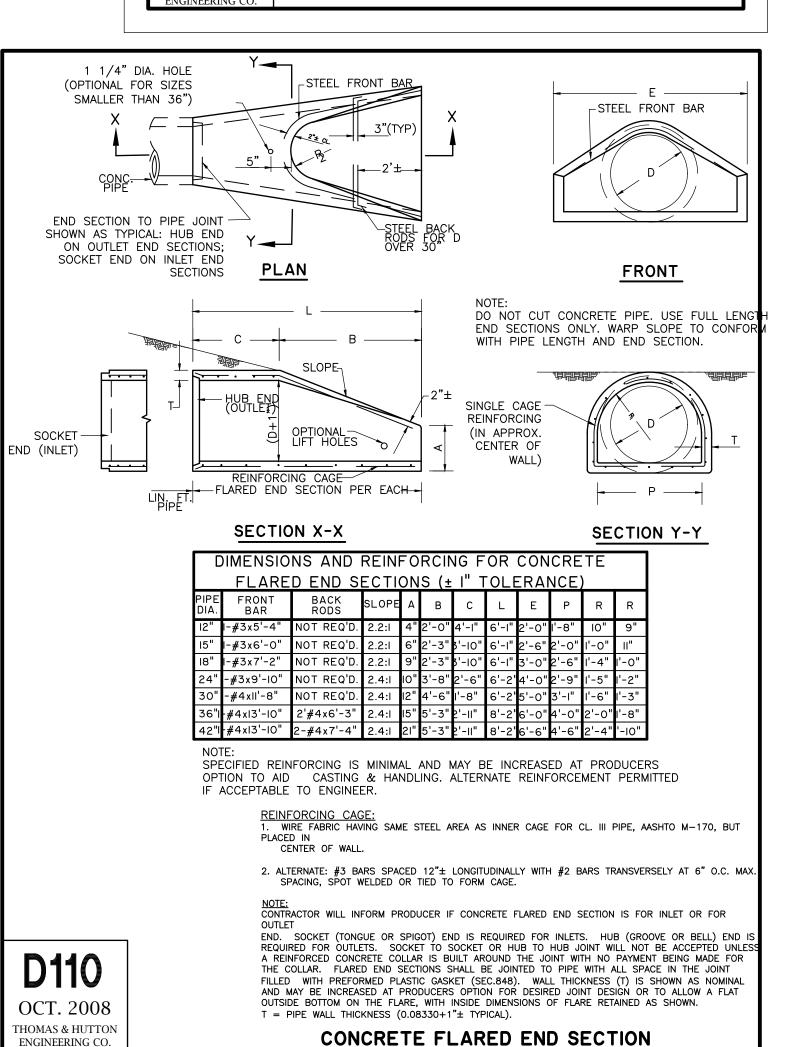
THE APRON DETAIL SHALL BE USED FOR ALL HYDRANTS, VALVES, POST INDICATOR VALVES (PIV) & LIGHT POLES LOCATED IN PAVED AREAS.

APRON DETAIL

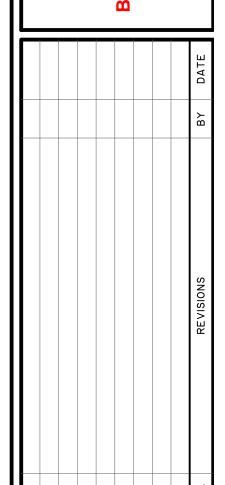
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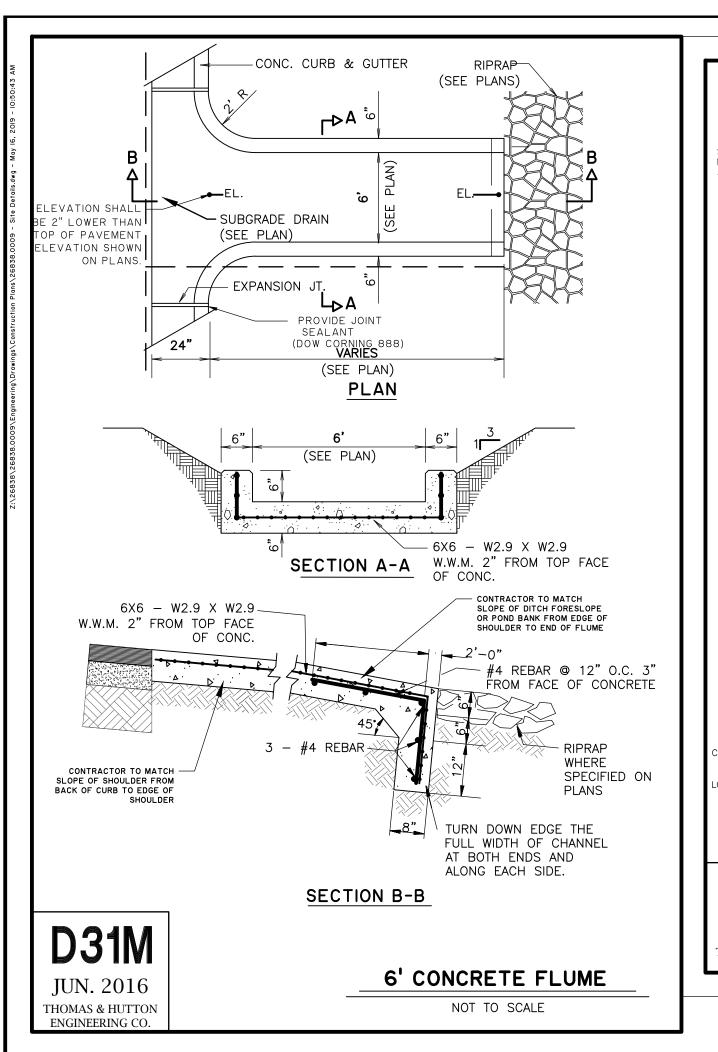
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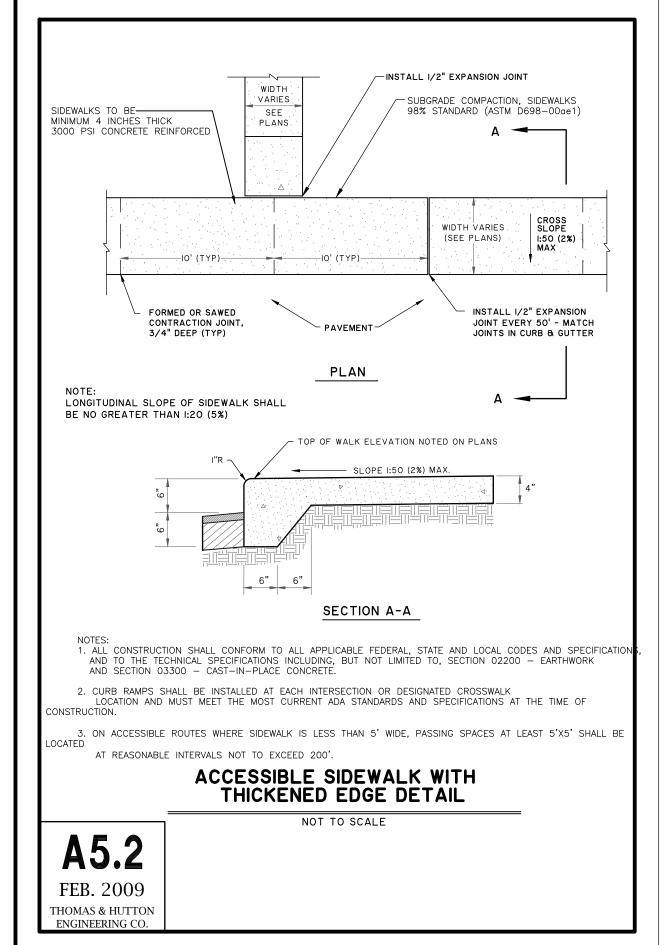
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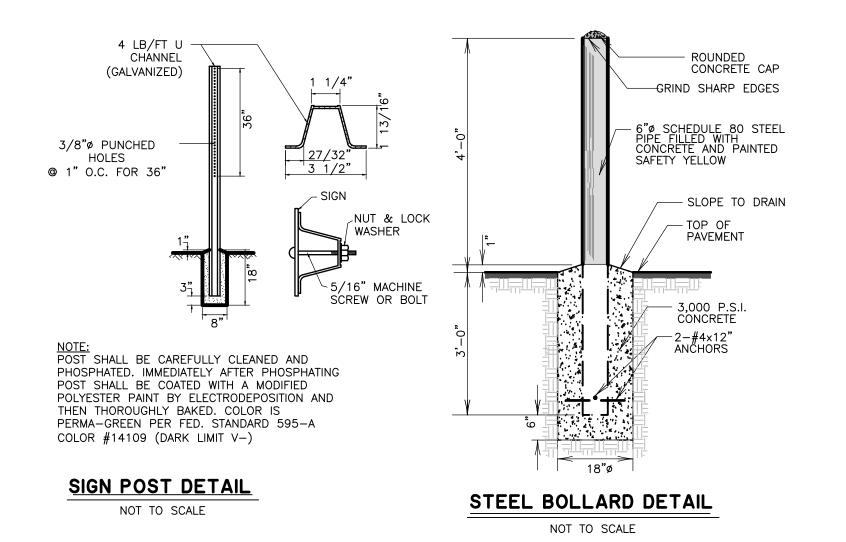
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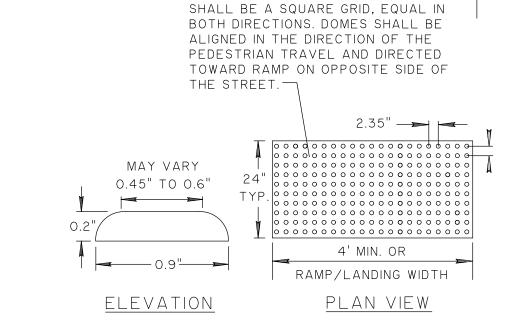
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NOTE:

1. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF CONCRETE, THE WARNING AREA SHALL BE RED BRICK IN COLOR. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF RED BRICK, THE WARNING AREA SHALL BE GRAY IN COLOR. THE COLOR USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.

2. BRICK PAVERS SHALL BE SET IN A WET MORTAR BED ON A 4" MIN. THICK CONCRETE FOUNDATION.

DETECTABLE WARNING DETAIL

NOT TO SCALE

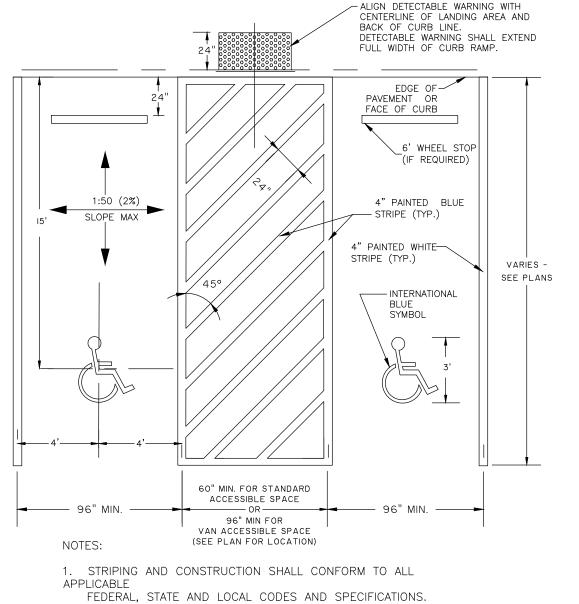
NORMAL CURB AND GUTTER

OPTIONAL GUTTER

OPTIONAL GUTTER

FEATHERING OF CURB AND GUTTER DETAIL

NOT TO SCALE

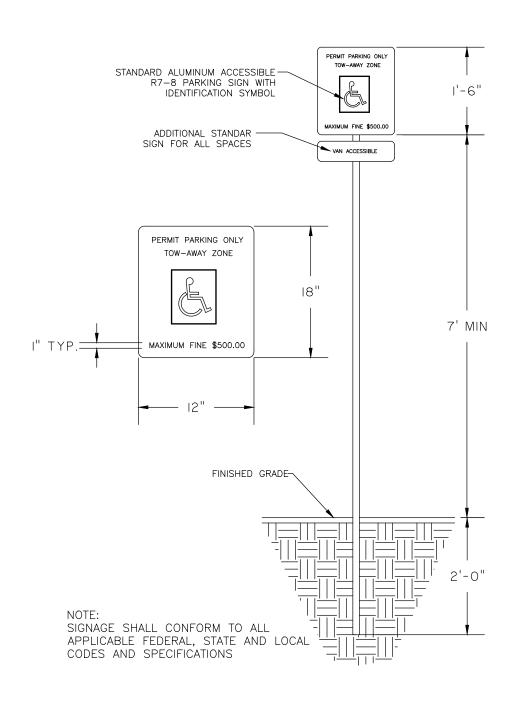


2. 2% MAXIMUM SLOPE IN ALL DIRECTIONS WITHIN ACCESSIBLE PARKING SPACE AND ACCESS AISLE.

3. ONE IN EVERY 8 ACCESSIBLE SPACES SHALL BE SERVED BY AN 8' WIDE ACCESS AISLE AND SHALL BE DESIGNATED "VAN

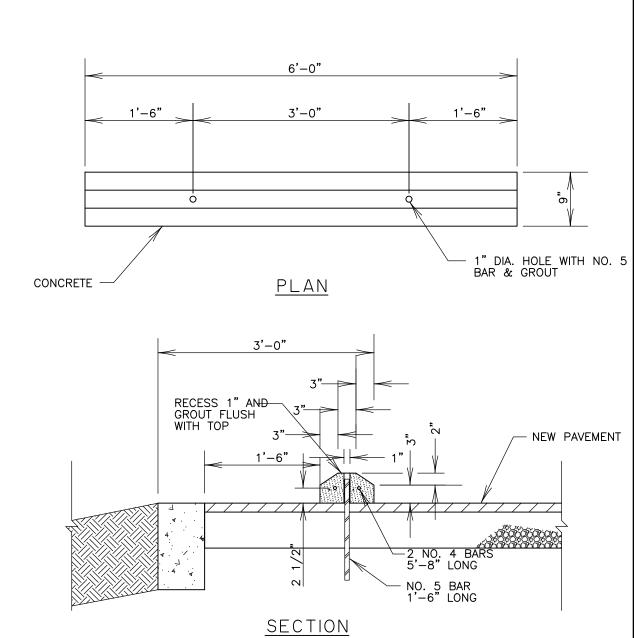
ACCESSIBLE PARKING SPACE STRIPING DETAIL

NOT TO SCALE



ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE



WHEEL STOP DETAIL

NOT TO SCALE

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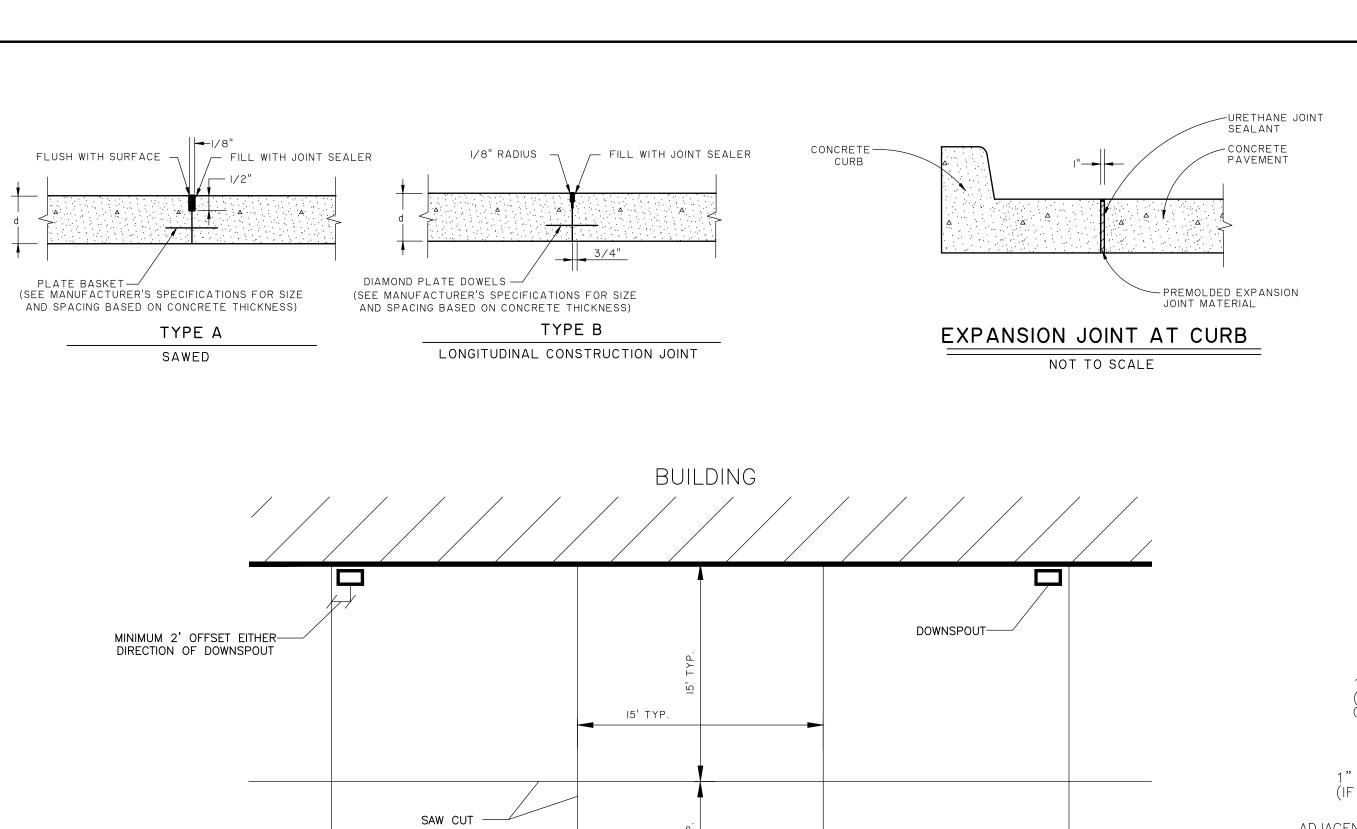
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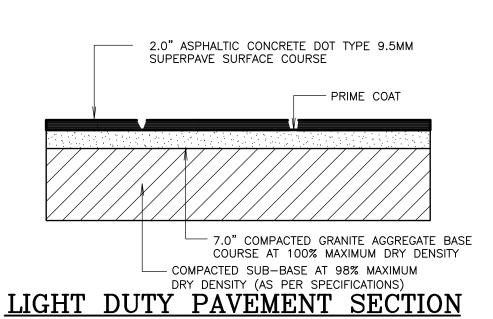
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DESIGNED: SRN
REVIEWED: JOC
APPROVED: TW

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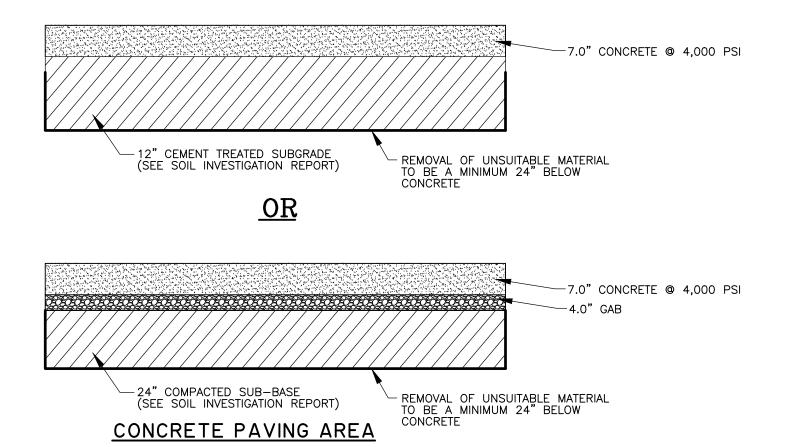


TYPICAL SAW JOINT SPACING

CONTRACTOR TO PROVIDE

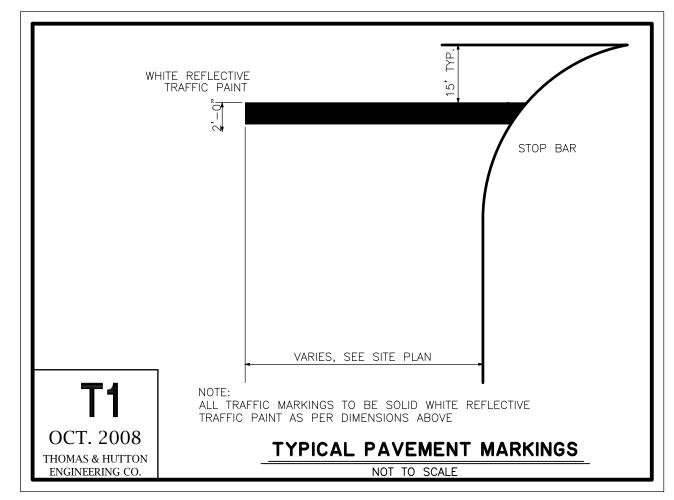
FINAL PLAN FOR REVIEW

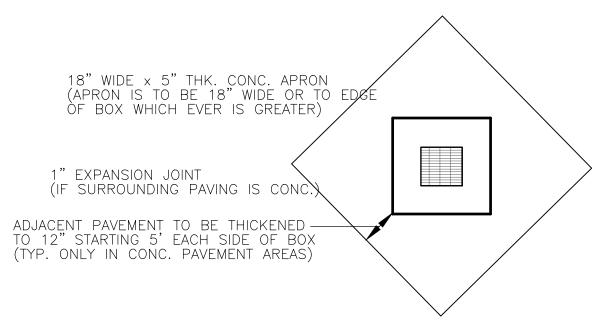
PAVEMENT SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER



PAVEMENT SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

TYPICAL PAVEMENT SECTION





### GRATE INLET APRON DETAIL

## NOTE: CONTRACTOR SHALL PROVIDE SAW JOINT PLAN TO ENGINEER FOR APPROVAL

I. ALL CATCH BASINS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BOXING OUT AROUND BASIN AS SHOWN ABOVE. EXPANSION JOINT MATERIAL SHALL RUN COMPLETELY THROUGH CURB AND SLAB. MANHOLE CASTINGS WITHIN THE PAVEMENT SHALL BE BOXED IN LIKE MANNER EXCEPT WHEN TELESCOPING TYPE CASTINGS ARE USED.

2. WHEN A JOINT FALLS WITHIN 5' OF OR CONTACTS BASINS, MANHOLES, OR OTHER STRUCTURES, SHORTEN ONE OR MORE PANELS EITHER SIDE OF OPENING TO PERMIT JOINT TO FALL ON ROUND STRUCTURES AND AT OR BETWEEN CORNERS OF RECTANGULAR STRUCTURES.

3. ALL TRANSVERSE JOINTS MUST EXTEND THROUGH CURBS AND MUST BE CONTINUOUS ACROSS PAVEMENT, EXCEPT TIED TRANSVERSE CONSTRUCTION JOINTS. EXPANSION JOINTS WILL NOT BE REQUIRED EXCEPT AT STRUCTURES OR AS SHOWN ON THE PLANS.

4. ALL SOFT AND YIELDING MATERIAL AND OTHER PORTIONS OF THE SUBGRADE WHICH WILL NOT COMPACT READILY WHEN ROLLED OR TAMPED SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SUITABLE MATERIAL PLACED AND COMPACTED. THE SUBGRADE SHALL BE THOROUGHLY COMPACTED WITH SUITABLE EQUIPMENT TO

HAVE UNIFORM DENSITY AT MOISTURE CONTENTS OF NOT LESS THAN STANDARD OPTIMUM(AASHTO 98). ALL SEWER TRENCHES AND STRUCTURE EXCAVATIONS SHALL BE BACKFILLED TO NATURAL OR FINISHED GRADE AS SOON AS CONDITIONS PERMIT. ALL BACKFILL SHALL BE COMPACTED WITH MECHANICAL TAMPERS IN LAYERS OF NOT OVER 6" LOOSE MATERIAL. IN ORDER TO PREVENT DIFFERENTIAL HEAVE THE BACKFILL MATERIAL SHALL BE THE SAME MATERIAL AS THE SUBGRADE ADJACENT TO THE TRENCH.

5. THE MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 6.0 SACKS (94 lb. PER SACK) PER cu. yd. OF CONCRETE. THE MAXIMUM SIZE AGGREGATE SHALL NOT EXCEED 1/4 OF THE SLAB THICKNESS. THE MAXIMUM SLUMP SHALL NOT EXCEED 3". ALL CONCRETE SHALL BE AIR ENTRAINED IN ACCORDANCE WITH THE FOLLOWING TABLE:

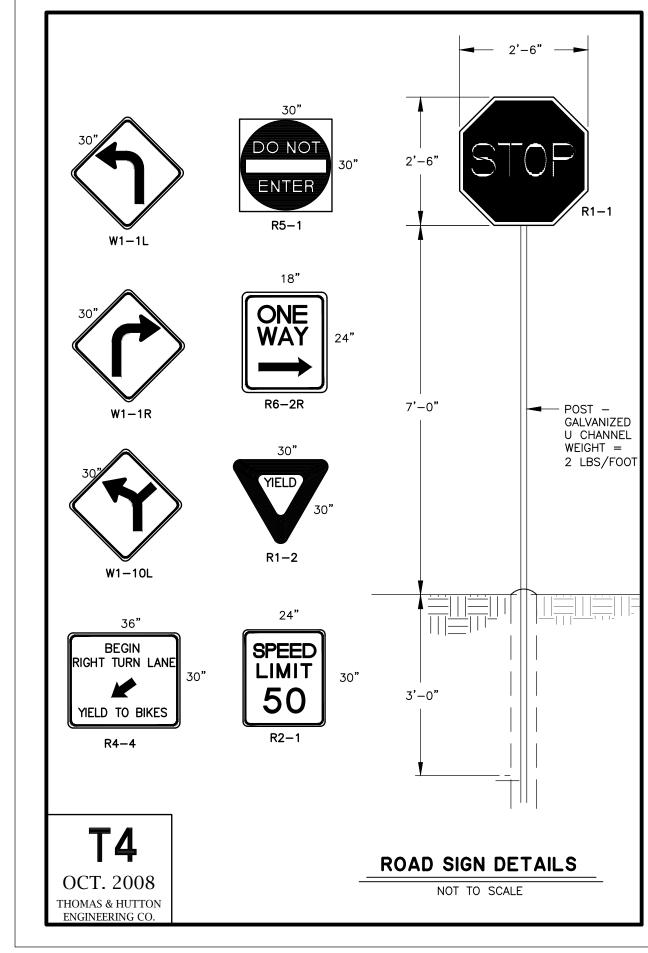
> MAX. SIZE OF COARSE AIR CONTENT, AGGREGATE, INCHES PER CENT BY VOLUME 1-1/2 , 2 3/4,1 3/8 ,1/2

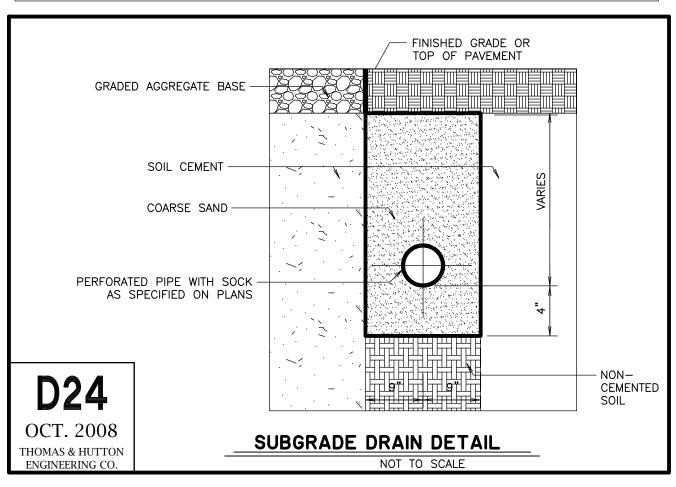
### CONCRETE PAVEMENT DETAILS

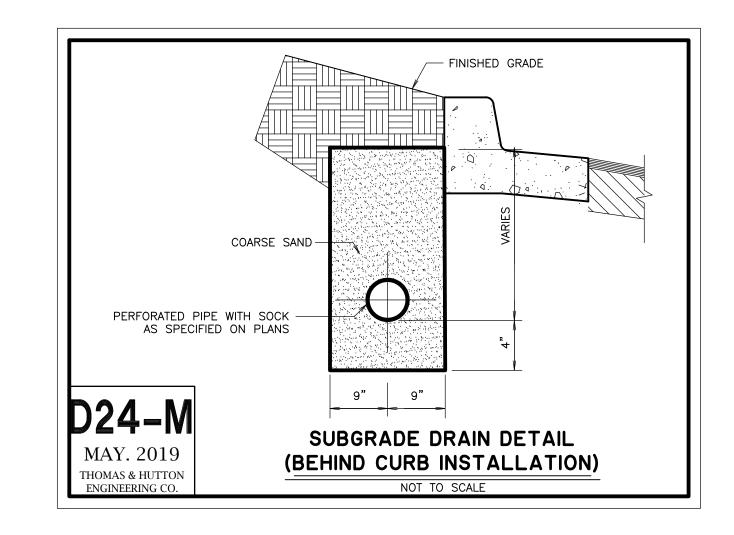
6 ± 1

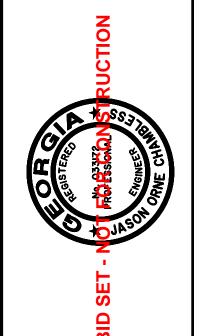
7-I/2 ± I

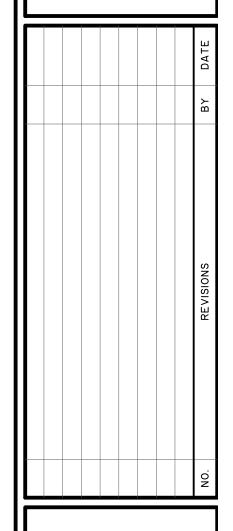
NOT TO SCALE











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DING OMP

M M P A

03/05/2020 DRAWN: DESIGNED: SRN REVIEWED: JOC APPROVED: TW SCALE: |" = |

CRANE